

AN ~~OF~~ PRACTICAL ESSAY
ON
FEVERS.

CONTAINING
Remarks on the Hot and
Cool Methods of their Cure.

WHEREIN
The First is Rejected, and
the Last Recommended.

To which is Annex'd,
A Dissertation on the Bath-
Waters.

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Dubiam Salutem qui dat afflictis negat.
Seneca Traged.

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Be pleased to Correct these few *Errata's* before you begin.

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THE PREFACE.

THE Practice of Physick is, in all Probability, as Old as Adam, who, by his own Folly, having broke in upon his Constitution, became subject to Diseases and Pain: Under these Circumstances it was necessary for him to observe the Juvantia & Lædientia, what agreed or disagreed with his Temperament; and thus by little and little his Experience increased, which he communicated to Posterity, to be farther improv'd

by them. This I take to be the Origin of the Art of Healing, which first came in by meer Chance; to which we owe also the Knowledge we have of Poisons, and their proper Antidotes. Sic Medicinam Ortam, subinde aliorum Salute, aliorum interritu, perniciofa discernentem a Salutaribus. Celsus in Præfat. We have no Innate Ideas in us to direct us a priori what to do; and all that we know we have a posteriori, from Experience and Observation.

---Artem Experientia fecit.

Exemplo monstrante viam. Man.

'Tis allow'd, the first Ages of the World were very Healthy, and Men lived to a great Age; which some have attributed to the Climate, and otherst o the manner of living before
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the Floud, which was very simple, and chiefly on Herbs and Fruits, so that 'tis likely they had little need of Physick to repair their Constitutions: But they could not but be liable to Accidents external, which put them upon the use of outward Applications and Surgery; and the Disorders occasion'd in the Animal Oeconomy by these Accidents soon made way for Physick.

Thus by degrees Physick grew, and in process of Time became a Profession or Trade. The first mention made of any Physicians on Record, is that of Joseph's commanding them to Embalm his Father in Egypt, Gen. 50. 6. which Chronologers tell us was about Two Thousand Three Hundred Years after the Creation. And Herodotus tells us, Lib. 2.

That Physicians in Egypt practis'd not on all Distempers alike, but appropriated their Study and Practice to particular Diseases; some were Eye-Doctors, others for the Teeth, Head, &c. the whole of Physick being in their Opinion too great an Undertaking for one Man.

We are told, That from the Brachmans or Bannians in the East-Indies the Phœnicians, Assyrians and Egyptians received their first Rudiments of Learning: That Zoroaster, King of the Bactrians, is the first whose Name is recorded as the Founder of Physick among the Persians, A. M. 1780. as Hermes, A. M. 2000. was among the Egyptians: But these Histories are very uncertain, and the Learned are not agreed whether there
ever

ever were such Men in the World. Vid. Conringium de Hermet. Med. Dr. Stillingfleet's Origin. Sacr. However, probable it is, the Egyptians might be very early in cultivating Arts and Sciences; so Moses we are told was Learned in all the Wisdom they profess'd, Acts 7. 22. And now tho' I can't consent to all that is said of these Great Men, yet with all Deference to the Authorities mention'd, 'tis hard, I think also, to conceive the Ancients, such as Strabo, Herodotus, Diodorus Siculus, Pliny, Cicero, &c. should name them so often in their Writings, had there never been any such Persons. 'Tis true, the Books we have publish'd under their Names are so full of Judaick, Platonick, and Christi-

an Philosophy, that they cannot be allow'd to be of that Antiquity which Borrichius, Patricius, and others plead for. What Hermes's Pillars were, so much Celebrated by the Ancients, in which his Doctrines were writ, is not known: They are said to be the first Original of Learning, and especially of Physick in Egypt, the Copies and Extracts of which, according to Iamblicus, from the Fragments of Manethon, made 36525 Volumes. Iamblicus de Mystr. S. 8. C. 1. These, some are of Opinion, made that Sacer Codex mention'd by Diodorus Siculus, Lib. 1. C. 82. which was the Standard Law of Physick among the Egyptians, kept by their Priests, and so Sacred, that 'twas a Capital Crime to administer Medicines

cines to any that were not to be found there. Vid. le Clerc. *Historie de la Medicine.* Let the History of Learning be as obscure and dark as it will as to the Egyptians and Assyrians, the Grecians, 'tis taken for granted, had their first Instructions from them. History tells us, That Cadmus, a Phænicean, and his Followers, brought Letters into Greece first. That the Learning Thales propagated in Greece, and Pythagoras in Italy, came also from thence, where they Travell'd and Convers'd some Years, as Diogenes Laertius tell us in their Lives. Whatever we have left of theirs now, consists only in a few Fragments scatter'd up and down in Authors, and are so full of Astrological, Magical, and Enigmatical

tical Fancies, *that we are little beholden to any of them for the Improvements they have made in the Art of Healing. Nay, the Great Æsculapius himself, (who was Worshipp'd as a God at Epidaurus, had his Temple built there, and his Statue of Gold and Ivory, made by Thrasimedes, the most Famous Statuary at that time, erected in Honour of him, for his Skill in Surgery,) 'tis allow'd brought it out of Egypt; and some are of the Opinion, this was no more than a Copy of a Person Worshipp'd in Egypt by that Name, many Years before he became known in Greece. His appearing, as 'tis said he did, to the Romans in the Form of a Serpent; his Oracles, like those of Delphi, deliver'd from time to time*

to such as *Worshipp'd* him, and *Sacrific'd* at his Altar for their Health, are nothing else but the Chicanes of Priests and Sycophants, who made an Advantage of such Artifices and Tricks. They say Apollo taught *Æsculapius* this Art; he, his Sons; and they, theirs: By this means thus Divinely begun, it was granted to them as a Favour of the Gods, kept as a Secret in the Family, and was to be communicated to none else. These were all Honour'd with the Title of the Sons of the Physicians, and *Worshipp'd* on that Account. Now all these Honours and Privileges descended in the Right Line to our Hippocrates, who is said to be the 17th. Descendant from *Æsculapius*. I cannot vouch all is true that is said of these
Ascle-

Asclepiades, 'tis probable many things are Fabulous in the Ancient Histories, and Accounts of Things, yet are they not all so. Learning and Knowledge came on gradually in the World, and has had its several Revolutions. No doubt there were very Learned Men before Hippocrates's time, tho' we have none of their Writings extant; 'tis hard to suppose he attain'd that vast Treasury of Knowledge and Experience he had, without the Assistance of any Masters; nor could he perhaps have given us such admirable Experiences and Observations in Physick, had the Archives of the Temple of Coos not furnish'd him with some, laid up there for many Ages before. Out of these Archives 'twas that our Great Master Hippocrates transcrib'd

scrib'd all the dispers'd Fragments of Physick he could find engrav'd on Plates and Tables there; these he digested into a Method, and with an extraordinary Industry and profound Judgment, adorn'd with such Universal Precepts and Observations so natural, as make this Work at this time the best Collection, and the most useful we have in Physick. These being all founded on Human Nature, not loose Imagination and roving Fancy, contain in them nothing but the pure Juice or Marrow of Practice, and the true Spirit of Physick, which must be always useful to the end of the World, and be justly stil'd Divine.

This then is the true Epocha of Physick, before his time all our Records were dark and obscure, and
so

So may well be call'd the First Age, and Infancy of Physick. Pliny I find makes Hippocrates the first Author of what they call'd Clinique Physick, as if he first introduc'd the Practice of visiting Patients in their Beds, but doubtless that Custom is much ancienter, and therefore attributed to Æsculapius by others. Certain it is our Hippocrates was a Regular Physician, that visited the Sick in their Houses and Beds, and no ignorant stroling Quack or Mountebank, who follow'd Markets, which is what I think is chiefly meant by Clinique Medicine. 'Tis oppos'd also to the Custom of laying their Sick in the Streets, and publick Places, to implore the Advice of such as came by, as Strabo tells us they did in Egypt and Spain. This
then

then is the same which afterwards is called the Dogmatick, or Rational Physick, which establishesthe Art of Healing on the best Foundations, Reason, Experience, and Observation, as we find it in his Works; and this is the first Sect of Physicians.

Celsus, our Latin Hippocrates, a Roman, and liv'd in the days of Tiberius, tells us in his Preface, That Serapion, an Alexandrian, and Disciple of Herophilus, who liv'd above 300 Years before our Saviour, instituted a second Sect of Physicians we call Empirick; these he says assert, That our Reason in the Practice of Physick was useless, and that Experience alone was sufficient to make a Man a Physician. Philinus was his Fellow Student, and

is

is by many suppos'd to have join'd Serapion in this Design; and that some Hints from their Old Master put them first on banishing Reason in the Cure of Diseases. But Pliny tells us, Lib. 29. Cap. 1. That Acron, whom our Chronologers place before Hippocrates, was the first Empirick; so that Authors differ about the Priority of these two Sects. It is without doubt, that Physick had its Origine from Experience, and so preceeded our Reason: But Schelhammer tells us they were both Cotemporary, and could neither of them be term'd a Sect till Professors were divided in their Opinions upon some Points, and made them so. Nulla enim est Secta, nisi secedant in partes Doctores. Vid. not. in Conring.

Intro-

Introduc't. *These Men were all Men of Learning and Philosophy, no ignorant Pretenders to Physick, and all I can find in their History is, That they had regard only to the evident Causes of Diseases, as only necessary to their Cure, and that obscure and remote Causes are above our Understanding; that is, they avoided all Finesses in Philosophy and Speculation, lest they should, by minding them too much, neglect their Observations from Experience. And this, I take it, is the meaning of that Expression in Celsus, That Hippocrates was the first that ab Studio Sapientiæ Disciplinam hanc seperavit, in Præfat. That he first divided the Study of Philosophy from that of Physick. Not that he excluded all Reason and*
Philoso-

Philosophy from the Practice of Physick, because we see in his Works he uses both, in the Account he gives us of Diseases and their Cures; but all his Ratiocination is from Experience, and never from any other Principles: And thus 'tis Hippocrates joining Reason to Experience has reconcil'd them both. For, as the same Author says in his Preface, p. 9. Remedies being first known, Men began to reason concerning them. Nec post Rationem Medicinam esse inventam, sed post inventam Medicinam, Rationem esse quæsitam. And this is the Case with all other Sciences whatsoever, as Columella tells us, Lib. 1. Cap. 1. de Re Rust. Usus & Experientia dominantur in Artibus, neq; est ulla

Disci-

Disciplina in qua non peccando discatur, nam ubi quid perperam administratum cesserit improspere, vitatur quod fefellerat, illuminatq; rectam viam docentis Magisterium. *That is, we learn by our Blunders and Mistakes to mend our Hand next. And certain it is, whoever follows any other Guide but Experience, gives a loose to his Fancy, and values himself upon his Reasoning more than his Experience, is but a meer Ignis Fatuus, and no steady Light at all.*

I am inclin'd to believe, Physick before Hippocrates's time being in the Hands of Philosophers, such as Pythagoras, Empedocles, &c. was kept as a Mystery from the People, and supported by Sophistry, Egyptian Superstition, and

and Philosophy, which Hippocrates being too honest to keep up, expos'd to the publick view of all the World, for the Good and Benefit of Mankind: And having collected all he found in the Archives and Repositories at Coos, I cannot blame him, as some do, for burning their Temples, if Matter of Fact be true, to prevent their Superstitions, and the carrying on of their Cheats any longer.

Thus Physick was manag'd and carried on for many Ages by the Dogmatists and Empiricks, sometimes one, sometimes the other prevailing most, till about 100 Years before our Saviour, Themison a bold Laodicean, establish'd the Sect of the Methodists; these positively asserted, in the Cure of Diseases

eases the knowledge of neither occult or evident Causes of them was at all necessary, and that 'twas not worth while so much as to be inform'd what Temperament the Patient is of, his Age, Nature, or way of living; for they had one short way with all Diseases, without the help of any of these impertinent Enquiries, which was, to consider some few Things common to all Ages, Sexes, and Condition of Life.

In order to this, they reduc'd all Diseases to Three Heads.

1. They supposed all Distempers were occasion'd from a Suppression of the necessary Excretions in our Bodies. 2. Or else, that we do sometimes excern, and throw off what was necessary should be retain'd within

within us. 3. And lastly, they allow'd of a Mixt Sort; when in one Part the Excretions were greater than they ought to be, and in another less. So that in all Distempers they only consider'd whether the Case required evacuating or astringent Medicines; and in those of the mix'd kind they always took care of the most important Evil: These are the chief of their Doctrines, which Galen has taken a great deal of Pains learnedly to confute, as a prevailing Party about his time. If these Methodists are in the right, then Physick may be brought into a very narrow compass; and as Thessalus boasted at Rome, in the Century before Galen's time, he might teach any Body the whole Art in six Months, without the help of any other Science.

what?

whatsoever. But these are no more than ignorant Mad-men, and true Quacks, who don't know that Diseases turn very often on Niceties, which ought to be consider'd judiciously. An Inflammation in the Eye is not to be cured as one in the Ear, or Throat. And we see it often happens, that Sweats and Hæmorrhages are lucky Crises of Diseases, and are often not to be stopt. And 'tis not always from the openness of the Pores that Colliquations happen, but sometimes also from a thinness of the Humours, or its too great quantities. These are to be enquired into by the Rational Physician, and will not fall under the Cognizance or Observation of meer Empiricks or Methodists, whose Ignorance is too
a great

great for such useful and important Discoveries.

The Arabians, who began about the Ninth Century, and continued to the Thirteenth, were (generally speaking) all Followers of Galen and Hippocrates, except Averrhoes of Corduba in Spain; Conringius tells us in his Introduction, Cap. 2. Sect. 17. and Liddellius, Oper. Cap 2. says, that Avicen and Rhasis, &c. were Dogmatists. Certain it is, since Galen's time, who was a zealous Stickler for the Dogmatists, the other Two Sects, of Empiric and Methodists, have dwindled away, and made no Figure at all in the World. See Page 132 of this Essay.

Thus I have given you, as briefly
as I can, an account of the three Sects
observ'd among the Ancient Physi-
cians, which Ausonius the Poet
expresses thus,

*Triples quoq; forma Medendi,
Quæ Logos, & Methodos, cuiq;
Experientia Nomen.*

These I take to be as so many Fa-
ctions in Physick, which prevailed,
as they were defended, by Men of
Parts and Subtilty of Argument.
Nature has been, and ever will be,
the same in all Ages; were Men so
too, there would be no need of Par-
ties and Disputes about her Operati-
ons; but our Faculties differ, and
the same Men have not the same
Notions of Things at all times; dif-
ferent Understandings must create
variety in Opinions, and Pride and

Ill-Nature soon form them into Factions. This I take it made way for the fourth Sect of Physick, which we call Chymists. It was began by Paracelsus, A. D. 1500. who rejecting all the Principles and Precepts of the Ancients, invented new ones of his own, very different from those of Hippocrates and Galen, and thus he becomes Founder of a new Sect, which in a little time spread over and infected all Europe; the giddy World was well pleas'd with his Novelties, and soon experienc'd the direful Effects of his Fiery Medicines. I shall not here entertain you with any long History of this new Head, or his Followers, it suffices in this place to hint only, that all his 3 Principles are precarious and false, and no more Elemental
and

and Homogenial than any other Bodies whatsoever. 'Twould be an endless Labour to run thro' all the Fantastick Fancies and Fanaticisms of this Wild Sect, their great Promises and no Performances. Paracelsus himself pretended to make Men Immortal by his Medicines, and yet 'tis well known he died soon after Forty. However, they have so far confounded their Preparations with the Old Medicaments and Methods of the Ancients, that the most Galenical Physicians in Europe upon occasion are contented to make use of their Elixirs, Tinctures, Essences, Sublimates, &c. And thus now-a-days the Galenists and Chymists are mix'd together, as the Dogmatists and Empiricks were of Old, as I told you before, excepting some few

a 3 Bigots

Bigots of each side, that will always rail at one another. A Spawn of this last Sect, I take it, all those are that cry up Acids or Alcalies, as if all Diseases were produced in our Bodies by one of them; the one fancying all our Maladies proceed from an Alkali in the Blood and Juices, Doses his Patients plentifully with Acids, in order to sweeten the Humours, and correct the Disorders occasion'd by their Alkaline State; the other thinks Acids are the only peccant Matter and Cause of most Diseases, is as liberal with his Alcalies, and the Patient has but a Chance which of these two he must take, and that depends wholly on the Person, who certainly treats him according to the Faction he is bigotted to. So what Pliny says

ma

may be sometimes true, Discunt
Periculis nostris, & Experimen-
ta per Mortes agunt. Lib. 29.
Cap. 1.

*The Fifth and last Sect of Phy-
sicians I have to mention, are the
Mathematicians. This Sect was
very lately, first Instituted by Belli-
ni, an Italian, whose Notional
Theory and Cure of Fevers we shall
enquire into in the following Essay.
These Gentlemen, if you will grant
them but all their Postulata, will
demonstrate every thing in Nature
Mathematically; and without that
you must excuse them, if they prove
nothing. In the Solids it must be Ac-
knowledg'd, some Mathematicians
have perform'd well; and if our
Diseases lay only in them, their
Principles would be of very great
In-*

Instruction and Use to Mankind. But Nature who is much subtiler than the best Mathematician, has contriv'd all our Fluids so variously, and with that Nicety determin'd their Motions, that by none of the Quisquilæ Mathematicorum they will ever be able to trace them out, or ever find their true Texture or Component Parts. These are the Arcana of her Empire, that are never to be understood but by Experience and Observation, the only way allow'd us to make Judgment of her Operations. All the rest is mere whip-cream, froth, and nothing else, and will never answer the pains we take this way to pursue after Knowledge.

Multa tegit sacro involucri na-
tura neq; ullis
Fas est scire quidem mortalibus
(omnia.

But would these Gentlemen quit their
Notional Finesses, and with that
Mechanical Genius, that seems
to inspire them, calmly consider what
Nature will do, and what she will
not; and weigh by Experiments
what steps she takes; such Enquirers
a Posteriori may give some Satis-
faction to themselves, and become
useful to Mankind. But till that
time, I shall look on them with respect
to Physick, and all the helps they may
be able to give us in the Cure of Di-
seases, as Useless and Dead to the
World as their first Founder.

Thus

Thus have I given you a short view of the Practice of Physick, from its very Beginning down to our Days, according to the best Light I had to help me in my Enquiry ; upon the whole I am of Opinion, an Honest Man may make good use of all the varieties of Opinions and Practices mentioned ; whereas he that addict's himself to any Sect whatsoever, straightens himself, and is thereby render'd less capable of serving his Neighbour when called to it. For my own part, I am no Sectary at all in Physick, but from evident Phænomena and Appearances, I form my Judgment of things. I love a little Reason with my Experience, but give it not too great a loose, lest I should seem to know more than I really do. Neoptolemus's case is mine ;
who

*who, as Cicero says, Philosophari sibi aiebat necesse esse, sed paucis, nam omnino haud placere. Cicero Tusc. Quæst. Lib. 2. With the Methodists, I believe the Practice of Physick may be brought into a much narrower Compass than it now is: and that there is a North-West Passage to the Cure of more Diseases than every Body will allow, by little Physick, and not Unpleasant Doses. I make use of Alcalies and Acids as I think they answer my Indication best, and often join them both together for the Benefit of the Patient. As for Mathematicks, I allow of none in Physick and the Cure of Distempers, but from Data that are demonstrable; and these, I think, are only Judicious Experiment, and Sound Observation. And yet I think, after all the Varieties of Notions that have been, and are maintain'd by Physicians, That a Regular Physician is more likely to be a good Commonwealth's-man, and prove more serviceable to Mankind in the Cure of Diseases, than any ignorant Pretender or Mountebank whatsoever: I only wish
the*

the Gentlemen of the Faculty lov'^d Money less, and their Patients better that they would contrive more pleasant Doses, or not repeat them too often; being constant in this Opinion, That Physick, like Armour, a little of it well plac'd may do much good; but a great deal of it applied, without a world of Judgment, Honesty, and good Nature is a Plague to a man's Body, a Vexation to his Soul, and a Curse upon his Estate. I shall only add this one word That having had Occasion to visit the greatest Part of Europe, since my being a Physician, and having never met with any Practice like what I have Censur'd in this Essay on the Cure of Fevers, and where out of England; I have wrote in English, and doubt not, on Occasion to defend it in another Language.

Red-Lion-Court in
Fleetstreet, 74-
by 10. 1704.

1

A Practical
ESSAY
ON
FEVERS.

FIRST PART.

SO many are the Miseries
and Calamities that at-
tend the happiest State of
Human Life, so many are
the Crosses and Disappointments
we meet with in the Course of
B our

our Affairs; *Accidents* from without threaten us on every side, and *Diseases* within (from the irregular and præternatural Motions of our Blood and Humors) are always breaking and destroying our Constitutions: Disorders of the *Mind* cause Distempers in our Bodies; and when the *Body* is out of *Tune*, the *Mind* is (for the most part) affected and uneasy: in spite of all the good *Chances* and *Favours* of smiling *Fortune*. So that the whole Course of our Lives seems to be but one continued Storm and *Tempest*, and we in constant danger of being lost. 'Twas this Consideration made the Elder *Pliny* say, *Nil Homini-
bus Natura brevitæ Vitæ præstitit
melius*, Lib. 7. Cap. 51. TH
greater

greatest Blessing Nature bestows on Mankind, is a short *Life*: Most certain it is, the sweetest of our Enjoyments have so much bitter in them, they are hardly worth the Pains we often take to come at them; and perhaps we had been Happier had we been without them. All the Conditions of this Life are liable to Misfortunes; and he is the happiest Man, *Cui Mens sana in Corpore sano*, that has an easie Mind and a good Habit of Body. And 'tis undeniably true, the most valuable Blessing to Mankind is a good State of *Health*, and all the rest are meer Parade, Pageantry, and Show. 'Tis our Unhappiness we never know the real Worth of this so great a

B 2 *Benefit,*

Benefit, but by the want of it and yet this is the *Sauce* to all the good things of this Life, and enables us to relish and enjoy them. 'Tis a *Jewel* in the Hand of a *Beggar*, makes him happier than his *Prince* that wants it. All *Grandeur* and *Wealth* cannot give ease in a Fit of the Gout or Stone. The most delicious *Dainties* of a *Roman Apicius* are nauseous to one that wants an *Appetite*; and the most Beautiful Woman can't Charm a Man that is scorching in a burning *Fever*, or frozen with *Old Age*. So that 'tis *Health* is the Source of all Human *Felicity*, and the *Soul* that animates all. For if *Pleasure*, and freedom from *Pain* be the chiefest of our Natural *Happiness*.

pinefs consists, then every one is more or less Happy, according to the measures of *Health* he enjoys: And as the degrees of his Strength and his Vigor are, so are his Pleasures greater or less, and by consequence his *Happiness*. 'Twas this made the Ancients ascribe the Gift of *Healing* to the Gods; *Æsculapius* was Deified on this Account, and Divine *Honours* were paid to his Family for some Ages, as the best *Benefactors* to Mankind; being of Opinion the greatest *Blessings* they bestow'd on them, was freedom from *Diseases* and *Pain*.

But of all the *Diseases* that vex Mankind, none's more frequent and Fatal than *Fevers*; and our Observations may inform us from

our Bills of Mortality, some Years a third part, others a fourth, fifth or sixth, and seldom so little as a seventh part of the common Casualties, are made up of the Sacrifices only that were offer'd up to the implacable *Fury* of a *Fever*. This has put Learned Men in all Ages upon the Enquiry into their *Nature* and *Cure*, and many have already published their Judgment and Observations, for the Benefit and Information of Posterity: So that the Argument seems quite exhausted before, and one would be apt to believe every thing has been said, could be said on this Subject, and that we needed nothing more on
that

that Topick. But the Field of *Nature* is infinitely large, and produces such Varieties, that as *Solomon* says, of making many Books there is no end. The Notions of Mankind are not always steady, and the same; the different Apprehensions of Men, the Prepossession of Education, and such like Accidents, will ever furnish the World with *Dispute* and *Controversie*, as long as *Human Nature* exists. For my own part, I am far from pretending in this to any new *Light* in *Physick*, or of assuming to my self the Name of an *Author* of any new Discoveries in *Fevers*; all the Vanity I have at this time is, to do all I can to revive the *Honour* of the *Antients*,

by shewing that a great part of the Modern Professors of the *Art of Healing*, are so far mistaken in their *Theories* and *Cures of Fevers*, as they deviate from the experienc'd *Rules* and standing *Laws* of the first Ages of Physick, when *Medicine* was in its State of Innocency, and Men studi-
ed more the *Art* than the *Craft* of that most Noble and Useful *Science*.

Now to encounter the Prejudices of one sort of People, and the almost invincible Ignorance of others, are both difficult Undertakings, especially where Men's *Interest* seems to be concern'd this is always a Spur to their *Malice* and *Passions*, and drowns many times even Humanity it self
when

when it appears to be cross'd and disappointed. But none of all the ill-natur'd *Censures* may be made, shall deter me from asserting the two following Positions; which tho' they may seem *Paradoxes* to some, I hope to evince as very presumptive *Probabilities*.

1st. That the warm *Regimen* now much in use in this *Town* in the Cure of common putrid *Fevers*, is a Method for the most part contrary to the *Nature* of the *Disease*, and too often proves *Fatal* to the *Patient*.

2^d. That there are very few continual *Fevers*, except in Pesti-
lential Constitutions, but may be cured by the first *Intention*, without the tedious expectancy of (at best) a very doubtful *Crisis*.

The Proof of these two Assertions shall be the Subject of this Essay. I begin with the first.

First then I say, The warm *Regimen*, now in use in this Town in the Cure of common *putrid Fevers*, is a Method for the most part contrary to the *Nature* of the *Disease*, and too often proves Fatal to the *Patient*.

By the warm *Regimen*, I mean warm Medicines, such as high Cordial Waters, Spirits, Mithridate, Venice-Treacle, Goa-Stone, Gascoign Powder, Lap. Contrayerv. Snake-root, Cochineel the Testaceous Powders, &c. these I say given every three or four Hours in large Doses, as the Custom is, exalt the Blood too much, raise the *Fermentations* too high

high, exasperate the Disease, and too too often destroy the Patient.

Before I enter into the Merits of my Argument, or undertake to prove my first *Assertion*, give me leave to premise, That I conceive one of these three *Opinions* of the Notional Causes of Fevers, prevailing in Men's Minds, has unhappily introduced this *Practice* among us.

1. Some have supposed *Fevers* to arise from Obstructions in the Habit of the Body, whereby Perspiration was stopt, and the Particles or Vapors that us'd to be separated that way from the Mass of Blood being now pent in, create all the Disorders in the Humors of our Bodies, which we call a *Fever*: In this Judgment

ment they conclude warm Medicines only, which by the brisk Motions they raise in our Blood open these Obstructions, cause a free Perspiration, disperse the fuliginous Particles from out of our Blood thro' the Pores, and so restore it to its due Temperament again.

2. Others, (especially such as are of *Cartesian Order*) suppose the Essence of *Fevers* to consist in the troubl'd and disturb'd mixture of the Blood, some Heterogeneous *Particles* being introduc'd into it, that obstruct the free passage of the *subtile Matter* thro' its Parts and Pores, and so confound its Natural *Mixture*: Now in this Case they can allow no other Medicines to take place.

as proper to restore the Blood to its due mixture again, but *Diaphoreticks*, and Sweating Medicines, which by opening the Pores may discharge those noxious Particles, and convey them out of the Mass of Blood; and when this is done, they think the natural mixture of the Blood is restored of course.

3. The last I shall mention at present, is the Opinion of a very prevailing Party now among us, That some *poisonous Ferment* has seiz'd the Spirits, and that a *Fever* is nothing else but a Struggle or Contest between the *Animal Spirits* and the Venemous Enemy that has attack'd them. And here the Indication from such a Theory laid down is very plain and

and obvious; the strongest Cordials and Ecphraëtiacks are little enough to promote the *Expansion* of the *Spirits* thus weaken'd, and assist *Nature* in her *Crisis*: Now if the *Spirits* are thus oppress'd, what but such Ingredients with Volatile and Spirituous Particles, are fit to recruit and support them, lest languid *Nature*, tired with the furious Attacks of the more active Poison, should yield the Victory to it without a *Crisis*? That this is the Practice, may be easily seen on the Apothecaries Files, viz. Bolus's or Powders of Snake-root, Bole, Gascoign-Powder, Goa-Stone, Bezoar, Lap. Contrayerv. to be repeated every 3 or 4 Hours, with a very warm Cordial to wash

wash them down: Thus our *Fancy* suggests an imaginary Cause of this Disease, and our *Invention* soon furnishes us with a suitable Method of *Cure*. I shall not here in this place spend time in refuting the *Theories* aforementioned, because I do presume the Sequel of this *Essay* will sufficiently prove them all erroneous; as also that the Practice founded on these Principles is dangerous and destructive of *Mankind*.

Having premised these things, give me leave to come to the Proof of my first *Position*, which I take to be true, for these following Reasons.

1. Because by their *Heat* they promote too much *Perspiration* and

and *Sweat*. I shall not here make any Philosophical Enquiry into the Cause of *Heat*, whether it proceed from any innate motions in the smaller parts of Matter, (as the *Atomists* and *Epicureans* hold) or whether the Celestial *Æther*, (according to the *Cartesians*) streaming thro' the Pores, causes such a Concussion of the Particles, as produces what we call *Heat*. All I have to consider in this place is, what Effect *Heat* has in our Bodies.

'Tis very obvious to every one, that will but reflect and observe, that *Heat* has always a tendency from the Center to the Circumference, (*i. e.*) that it expands it self to all parts alike, equally distant from its Center.

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For this Reason the Great *Architect* of all Things has plac'd the *Sun* in the *Center*, that his kind Influences might be dispens'd to all the Parts and Regions in its own *Vortex*. 'Tis very plain also, that the greater the *Heat* is, the quicker the Particles fly off, the larger will the Circumference be, and the greater be the discharge. As *Vander Beck* observes, in *Lib. de Experim. circa Res Natur. p. m. 35. Nullum conflagrare Corpus, nec calefieri posse advertissem. citra particularum quam plurimarum amissionem*: No Body can be heated, but must lose part of its Substance.

These Thoughts incline me to believe, nay, I am verily perswaded, when the *Heat* is greatest

est within us, we perspire most, tho' sometimes *Sweat* least. This holds good according to the *Statick Laws* of *Sanctorius*, and may be clearly evinc'd by the following Observation. If in Distillation you happen to make a moderate Fire under your *Retort*, the moisture that flies out of it will distil drop by drop, because the Vapors cooling and condensing in the Neck of the *Retort* do resolve into a *Liquor*: But if you make a great Fire in the *Furnace*, so that the Neck of the *Retort* comes to be heated too much, all the moisture is driven away insensibly, and not the least humidity observ'd, tho' the greater quantity at that time is

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undoubtedly and beyond all dispute discharg'd.

Thus happens it with us, when the *Heat* is moderate to such a degree in the *Habit* of our Bodies, we observe a moisture on it, we call *Sweat*: But in burning *Fevers* and præternatural *Heats*, these *Sweats* are rarified into a sort of dry *Exhalations*, and are neither seen nor felt at all, which no accidental straightness of Pores can in the least confine and keep in. Now this way of Reasoning I take to be much more Philosophical, than the Cause assign'd by Dr. Morton, who *Lib. de Feb. p. 65.* has these Words, *Nec frigus tantum verum etiam nimius caloris gradus constricti- nem spasmodicam horum pororum inferre*

inferre valeat: That Heat as well as Cold straightens the Pores of our Bodies, and (from thence he infers) checks Perspiration: And this I take to be the *Basis* of that Practice; but conceive nothing more erroneously, nor of worse consequence in *Fevers*, could have been suggested to the *World*.

The Honourable Mr. Boyle in his Treatise of the *Atmosphere* of consistent Bodies demonstrates what I have said by Experiment, when he says, That not only fluid and soft Bodies have their Emanations, but the most solid and hard, (notwithstanding the very strict cohæsion of their component parts) have their Steam too, viz. *Diamonds*, *Crystals*, *Loadstones*, &c. and these when
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rubb'd a little, and heated, emit them always in a more plentiful manner; which confirms my Argument: For if such Bodies as these perspire continually thus, and more when heated a little, as any Body that will consult that Noble *Author* will find clearly made out by Experiment; then how much more reasonable is it to believe so porous a Body as ours is, and full of Juices, must have larger Evacuations this way in a *Fever*, (when the Heat all over the Body is intense) than at any other time, when the Blood is more temperate, and the *Heat* in a less degree. And hence I think it seems evident, that the great Droughts and Thirsts in *Fevers*, little Urine, few

few or no Stools, small, and often no *Sweats*, (tho' Liquids are taken in plentifully) besides the great Wastings observ'd in burning *Fevers*, (tho' but of a very few days duration) can be fairly accounted for no other way, than by allowing, that the Cause of all these must be attributed only to a too liberal Perspiration. *Gomes Pareira* I remember p. 117. *de Feb.* has these Words, *Quis enim non experitur a quavis levissima Febre attenuari Homines, quod per habitum digerantur succi in vasis Febrientis contenti, & etiam nonnullae ejusdem Corporis partes.* And 'tis I presume on this occasion change of Linnen is denied in *Fevers*, because being clean they cause too great a Perspiration and Expence

by scouring the Skin, imbibing the moisture, and opening the Pores for a freer passage. This is agreeable also to the Doctrine of the Great *Hippocrates*, in his Book *de Salub. Dieta.* where he has these Words, Ἡμφλέαζ ὃ χρὴ τῷ χειμᾶνος καθαρά ἱμάτια, τῷ δὲ θέρεος ἐλαιοπινέα, (i. e.) you must wear clean Linnen in Winter, and foul in Summer. And much to the same purpose is what the same Divine Author tells in *Lib. 6. Epidem. Sect. 6.* ἐνθερμότερον φλέβιον αἵματος πλήθει ἀνίχει τό καυσῶδες, καὶ ἐυδύς ἀποχρίνει, (i. e.) *Calidissima Venula Sanguinis multitudine id quod fuliginosum est exerit & statim secernit.* So that as *Hippocrates* says just before the last Quotation, 'tis very obvious to our Senses,

ses, ὡς ἐκνοον ὅλον τὸ σῶμα, *quod totum Corpus est expirabile*. I think it's as clear from the same *Author* in the place just now mention'd, and some others I have on this Occasion quoted, That as our Bodies are perspirable, the more our Blood and Humours contained in us are heated, the greater must be the Expence by Perspiration. From hence it will plainly follow, those warm Cordial *Spirits*, so much in use among some Gent. having an actual *Heat* and *Fire* in them, which they communicate to the fluid and solid parts of our Bodies by adding Fire to Fire, must cause a greater *Heat* and Irritation in us, and a too plentiful Perspiration attending, cannot but aggravate

aggravate and heighten all the Complaints, which were severe enough before. By this so large a *Perspiration* all the parts of the Body are defrauded and depriv'd of their proper Nourishment, and the Blood is fired for want of Liquids. This appears by Inspections of such as dy'd of Fevers, upon Dissection: For as *Bonetus* tells in his *Sepulchret. Cap. de Febrilibus*, That the parts are found very dry, the Blood-Vessels empty, the Humours very thick, Obstructions and Inflammations in several parts of the Body, especially in the *Viscera*, and several other appearances of this nature; which may be found in the author's Collections upon this head, to which I refer my Reader

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der for more ample Satisfaction. And tho' I can allow sometimes *Fevers* may arise from Inflammations, Obstructions, *Wounds*, &c. which we call Symptomatical, yet I am inclin'd to believe these are for the most part the Consequence of the internal Heats, and the disturb'd mixture of the Blood and Humours, as their Original Cause: And this will be more manifest from the Observations collected by the same *Author*, upon the Inspection of such as died of *Poisons*. But this is not all, for the parts are not only defrauded for want of those *Juices* that are expended by Perspiration, but the very *Spring* of *Life* within us are weaken'd by this Method to that degree
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that Sense and Motion are very languid, and almost lost on this Account. This brings into my Mind the good Caution the Learned *Sanctorius* gives us, *Aphor. 36. Sect. 5. Qui vult diutissime juvenilem Faciem conservare, caveat ne nimium Sudet, vel nimium præcalore perspiret, (i. e.)* He that will look Youthfully when he is Old, must take care not to Sweat too much, nor by heating his Body too much cause too free a Perspiration. I remember *Barbolin* tells us in his *Acta Hafn. Obs. 116. An. 167.* That the heat of a Fever in the Mother had dried the Bones of her Infant, that when she was deliver'd you might have bruised them to Powder, *vid. Boneti Sepulchretum, p.*

m. 1452. In the next place, tho' I can allow *Testaceous Powders* have no *Actual Heat* in them, yet have they the same Operation by Accident, that is, they absorb the little *Acidity* that usually and naturally is brought into the Stomach by the secretory Glands there; some very small part also may mix with the Liquids in the *primæ viæ*, and passing into the Lacteals and Lymphatics destroy the *subacid Juice* that is in them: Now this Juice was design'd by Nature to preserve their fluidity and to curb the exalted state of the Blood at this time, and wou'd have been of use to continue the *Animal Oeconomy* in better Order and Temper. 'Twill hardly be denied me, that the Lacteals and Lym

Lymphaticks from all parts supply the Blood, not only with their Liquor, but that they afford it a subacid or subsaline Juice too, somewhat of an Essential Natural Salt, that feeds it also: This I take it they derive from the *Saliva*, *Pancreas*, and Intestine Glands, who have all a manifest Saline Quality or Acidity in them, as *Sylvius*, *Degrauf*, *Bellini*, *Bagli-vi*, &c. have prov'd. And this I take to be the Reason why some Learned Authors suppose all *Chronical Diseases* are originally in the *Lympha*, and all *Acute Distempers* in the Blood, from the too acid Disposition of the one, and the too exalted Alkaline Nature of the other. I know tis the Opinion of many Profes-

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sors of Physick, that the Blood has no Acid at all in it, because upon trial by Distillation it affords none at all: But if the Lymphaticks and Chyle, which are always emptying themselves into the Blood Vessels, have somewhat Acid in them, then the Blood must have an Acid in it also, tho' in small quantities at a time, and it seems to be lost when mix'd with so many different Particles as it meets with in the Blood. Now 'tis no Wonder, that when the Blood is drained of its Juices and Moisture, it yields no Acid at all when tried by the Fire: And 'tis very probable that very Alcaline Spirit drawn from Blood was not præexistent in the Mass before, but rather
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the product of the Fire. Matter put into different Motions alters its Texture mightily, and the Bloud consisting of a great variety of component parts that are of different Size, Shape, and Figure, cannot but be much changed by the Motions and Heat it must undergo in Distillation. So that the *Spirit* drawn from it was no more existing in the Blood before, than that *Spirit* which may be Distilled from *Venice Treacle* may be allow'd to be one of its Ingredients. Nature has no where, that I can find, made either Acid or Alkali Salts, but a certain mixture of both seems to me to be her Design in every thing, tho' sometimes one, sometimes the other is predominant

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in this or that Body: Thus 'tis in our Bloud, where the Alkaline part, exalted by its *Heat* and *Motion*, being predominant, soon assimilates the Chyle and Lympha that falls into it, and exalts their Acid into an Alkaline Nature: And after the same manner the Juices that are separated from the Bloud, when mix'd with the Chyle and Lympha, for want of that *Heat* are soon depress'd to an Acid again: *Acids* and *Alcalies* being no Principles of Nature, but convertible into one another, according to the various Motions they meet with: as Mr. Boyle well observes and demonstrates in his Treatise of the producibleness of Chymical Principles. And I am persuaded

ded, did not the *Acid* in the *Lympha* sometimes check and curb the exalted State and disorderly Motions of the *Bloud*, it would soon be dissolv'd, and lose its Texture, and so become unfit for the Offices of *Nutrition* and *Life*: On the contrary, too much *Acid* would cause such *Coagulations*, as would in a little time put a stop to its *Circulation*: This is illustrated by the *Injecti- ons* of *Acids* and *Alcalies* into our *Bloud-Vessels*, where one destroys in a few Moments by *Coagulation*, and the other by the *Dissolution* of the Texture of the *Bloud*. In the due mixture then of these two Ingredients in our *Bloud* consists chiefly our *Health*, and the great difference there is

in *Constitutions*; vide *Baglivies Experiments* at the end of his late Book *de Fibra Motrice & Morboſa*; where he demonſtrates by Experiment that the Salival Lympha has a predominant Acid in it, as the Bile has a predominant Alkali. But to wave any farther Diſcourſe on *Acids* and *Alcalies*, we ſhall proceed to obſerve, that in *Fevers*, by the extraordinary heat of the Bloud in its proper Veſſels, the *Lymphatick* Juices grow much thicker, the thinner parts being exhaled by Perſpiration, their Motion is much ſlower, and by conſequence cannot flow into the Bloud, as when the Body is in its good and natural Order. Now I take the uſe of theſe *Lymphaticks* in our

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Microcosm to be the same with Rivers and Springs, which continually flow into the main Ocean, to dilute and cool it; without these in no long time the Sea itself would be little else but heaps of Mud and Salt; and, if I mistake not, were it not for the constant supply the Blood has from these Rills and Rivulets the Lymphaticks, which *in statu sano* constantly fall into it, the Compages of the Blood would become so thick, and its Salts so highly exalted, that the Circulatory Motions would not only be impeded, but all *Secretions* absolutely necessary for the *Animal Functions* would soon be obstructed, and the whole Oeconomy of the Body totally suspended and laid aside.

aside. I must grant some few Constitutions will endure the use of warm Medicines better than others, who are not able to bear the Expences they are at in too liberal a Perspiration, and violent Sweats, which carry off in their Operation not only the noxious Particles in our Bloud and Juices, but the most benign and beneficial, such as are absolutely necessary to the supporting of the Animal Life. But how prejudicial those forc'd Sweats are, *vide apud Benevenium, Obs. 53* *Pereiram, de Feb. p. m. 117.* So that upon the whole, Alexipharmacks seem to me rather to heighten these Disorders, by increasing the Motion and Fermentation of the Humors; by them

the Blood is also made unfit for Animal Spirits, no Bile is separated from it, nor Pancreatick Juice; no Stools, but what are provoked by Clysters, except such as are often Fatal, and no Relief at all; no Urine, but in a very small quantity; the Mouth is continually dry, because the Salival Ducts are stopt that serv'd to moisten it; and tho' they sweat for several days together, yet these forc'd Symptomatick Sweats, like the Tears of *Hysterick Women*, are rather the Effects of Spasms and Convulsions from the force of the Medicines, than any Natural Discharge: I say these Sweats are occasion'd by the Contraction, nor the Laxity of the Lactaneous Glands, as

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Dr. Morton very weakly argues in his Book *de Feb.* p. 64. This agrees very well with that *Aphor.* in *Sanctorius*, *Aph.* 3. *Sect.* 5. *Sudor semper est a causa violenta*, Sweat is always forc'd. For this Reason good and bad Juices being thrown off together, the Patient grows worse and worse every day. *Sanctorius Aph.* 26. *Sect.* 2. *Per totam Cutim digeritur semper aliquod a calido quod secum etiam interni probi Humoris aufert. Vide Cole de Casu Epileptico*, p. 130. *Hippocrat. prænotiones*, *Sect.* 5. Moreover the Patient is so weaken'd with the constant Expence he is at in Sweating, that the Physician can promise no good at all from his warm Doses. In this posture of Affairs sometimes the

the Pulse beats higher, sometimes lower, sometimes quicker, sometimes slower, now equal, then again unequal, one while a little hearty, by and by quite faint, and dying away; thus is there a constant ebbing and flowing from the beginning to the end of the Distemper; the Patient always fearful, the Physician doubtful, not knowing this day what to expect from his Medicines to morrow; and all this from the Disorders the Animal Spirits and Humours are put into by the hot Cordial Draughts and Bezoardick Bolus's. The Course of Nature thus perverted by these unseasonable Methods and Application, and being thus turn'd Topsy Turvy, no Wonder

der the Complaints increase, and the Case grows more doubtful every day. For my own part, I have often observ'd the sad Effects of warm Medicines in *Fevers* by such as were led by Books to follow that Practice; and a few Accidents in *Barracks* and on *Ship-board* have given me better Information about the Cure of *Fevers*, than all the Authors I have ever met with.

Another ill Effect of these warm Medicines, are *Rashes* all over the Body, which are very frequent more from the Nature of the Medicine, than any real Disposition of the Disease to discharge it self that way; and have known when I have been concern'd where large *Rashes* have

have appear'd, occasion'd by great quantities of *Snake-Root*, *Theriaca*, &c. (which were plentifully given before I came, and had thrown off more Matter on the Habit of the Body, than could be discharged by the Pores of the Skin) that upon altering that Method for a more temperate one, have soon disappear'd, and all the other Symptoms also. I am not ignorant many are of Opinion this is a malignant Symptom, which can never be carried off, but by such kind of Medicines as I say caused it; but would they calmly consider the Matter, they might find it more reasonable to conceive it rather the Effect of Medicine than of Nature to throw off any peccant Matter.

Matter that way, and that more temperate Medicines cause *Sweats* much more to the Advantage and Relief of the Patient. 'Tis I know a very common thing with some Men to stile that a *malignant Fever*, which really is not so, but only the Effect of their immoderate warm Medicines. And I remember I have seen in some Sanguine, Youthful, and Robust Complexions and Constitutions, *Fevers*, only occasion'd by some accidental Irregularity, as catching Cold, sitting up late at a Bottle, or the like, rais'd so high by Medicine, that they have ended at last in glandulous Swellings, like those of the Plague, the too warm Method prescrib'd exalting the

Febrile

Febrile Ferment, or else firing or irritating the *Spirits* to that degree, that all the Humours are irregularly hurried about, the Fibres of the Blood quite broken; and then 'tis no Wonder *Symptoms* little less than what we meet with in the *Plague* make up the last *Catastrophe*; whereas gentle Evacuations at first, and a more moderate *Regimen* might have curb'd those Disorders, prevented their coming to that height, and *Nature* might have been at leisure to have thrown off the offending Particles thro' the *Common-Shores* design'd for that purpose. For, as I said before, all Animal Secretions are perform'd by the placid and regular Motions of the Humours
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in our Body: By these slow Motions, *Nutrition*, the chief Design and Intent of *Nature* in all she does, is carried on, and Nourishment convey'd to all the parts of our Body, deposited there, and assimilated as there is occasion for a Recruit in any part: But this is altogether impracticable, where the Fluids are carried about in too swift a Current and Motion; nor can those Particles that are unfit for Nourishment be separated from the Blood by their proper Secretory Ducts. All the while Nourishment and Secretions are regular, the *Animal* must be right, lively and in *Health*: But all Deviations from this Rule are what we call a *Disease*, which tend by degree

degrees to the Corruption or Death of that Animal: And this of a Fever I take in an eminent manner to be a sort of Putrefaction. 'Tis a very common thing for such as lye ill of lingering Fevers, to send forth a Cadaverous Stink before they Die, and the warmer the Regimen, and the higher the Fever, the greater always the Putrefaction. There is one thing more requires our Consideration, to support with temperate Cordials broken and weak Constitutions, whose *Viscera* are not sound; but I can't imagine any Habit of Body whatsoever can require such vast quantities of Spirits, Powders, and Cordials, as are too frequently prescribed among us here in
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England, and no where else. 'Tis no uncommon Practice neither for some Men, fond of their warm Medicines, to mistake a small Hypochondriack Fever for what they call Malignant, because in such Cases the Pulse is somewhat quick, low, and weak, and the Habit of the Body warm, and this they call a Fever of the Spirits; so to work they go with their Cordial Bezoardick Bolus's, Juleps, Blisters, &c. and thus the *Fire* is blown up in a little time, which would have gone out of it self in a few days, had more temperate Methods been used: Thus a *Fever* is form'd in all its Circumstances, and the Patient falls a Sacrifice to the Mistake of his Physician; the

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Heart loses its motion, and the Blood congeals even under the unhappy Operations of the warm Cordials.

To sum up all in a few Words; by means of warm Medicines in the Cure of *Fevers*, the Serum of the Blood is too much expended, which serves to dilute the rasser and most ramous Particles, in order to a freer Circulation and Secretion; the Intestine Motion of the Blood, which is naturally very placid and easie, is disturbed, its Natural Mixture confounded, and its Circulation disordered; and more than this, the whole Habit of the Body is weaken'd in its Tone, all the animal *Functions* are out of order, and Nourishment, the chief Design

Design of *Nature*, is laid aside, for want of moisture in the Bloud and Nerves to supply the prodigious Expence of both by the warm Regimen. Whoever desires to be farther satisfied on this Argument, may consult my very Learned Friend Dr. Cole in his late incomparable Treatise *de Perspiratione Insensibili*, p. m. 126. &c. It may be objected that Absorbents, and such like Medicines, are proper in our Climates, where *Fevers* are rather from some Fault in the Lymphatick Juices, than any too exalted State of the Bloud.

I answer, such *Fevers* there are, and often happen to Hysterick Women and Children, and a due regard there must be had

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o such, which if ill treated soon become *Hæctical*; but then there is a great deal of difference between giving a few Doses in these Cases of Testaceous Powders, and so purging them off, which lasts but a little while, and continuing them four or six times a day for three Weeks or a Month together. Nay I allow there are Fevers among us sometimes, which Baglivi calls *Febres Mesentericæ*, these he says are rife about Rome, and are crude, slow, tedious, and hard to be cured; yet these too I am very well satisfied may be treated according to that Learned Author's Words, *Sine Chimeris Testaceorum, quæ acida imaginaria & ficta absorbent.* For my own part, I have seen

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more done in such Cases from thin Diluters, Volatile Spirits, Diureticks, Anodines, and Purgers, than from the whole Tribe of Alcalies, and Ecphracticks, tho' it must be allow'd a greater liberty may be taken in these crude Cases in the use of both of them.

I shall conclude this Argument with that Aph. of Sanctorius, *Stat. Med. Aph. 59. Sect. 1. Spatio unius Noctis Sexdecim Unciæ Loti plus minusve, quatuor Coëtorum Excrementorum per Alvum, quadraginta & ultra per occultam Perspirationem evacuari ut plurimum solent.* That is, one time with another we evacuate by Perspiration in one Night as much as we do by both Stool and Urine. I will not pretend

pretend from this Aphorism, as the Learned *Bellini* and *Dr. Pitcarn* do, to demonstrate how much, to the Twelve Hundredth part of a Scruple, we perspire every Hour; these Guesses are too nice for me; but I must confess, if all Constitutions were alike, Climates and Countries and ways of Living the same, this way of Criticising might be of use to help us in time, not only Mathematically to discern the Animal Oeconomy, and the Cause of Diseases, but also teach us in a little time demonstratively how to cure Fevers, and all other Distempers; but till such Preliminaries mention'd, and some others (I may have occasion to mention hereafter) be ad-

justed, I cannot but suspect this *A. B. C. Darian* way of arguing, as trifling and impertinent, mispending that Time that ought wholly to be employ'd in Observation and Experience, the only Demonstration we can have in Physick: And all the use I shall make of it at present, is to draw this Inference from it to my purpose, That if Perspiration in time of Health, when the Body is in good Temper and moderate Heat, is in proportion equal to all the other Evacuations and Excretions of our Bodies, then 'tis very probable in Fevers, when the Heat is much more intense, that according to the præternatural degrees of Heat, the Evacuations and Ex-

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ences by Perspiration must be increas'd also; and if so, 'tis probable the warm Regimen, by causing too great a Heat, may promote too free and plentiful Perspiration, and by consequence prove Prejudicial, and often Fatal to the Patient.

Before I enter on another Argument, I must take notice of a very ill Custom some People have taken up in this Town, of wearing Flannel Shirts next their Skin; I will not say they are injurious to every Body that uses them, but this I dare affirm, they hurt the Constitution of the greater part that wear them, by keeping the Pores too open in the Habit of the Body, and causing too great a Perspiration and Sweat,

such Persons are very subject upon the least occasion to catch Cold, and are always complaining, often Weak, Faint, and Hypochondriack; in these Circumstances Medicine gives no manner of Relief, the Cause must be taken first away, which will never be till the Flannel is laid aside; one or two Bathings in the Cold Bath will soon enable any one to leave off this *Coffin-Dress*, without danger of catching Cold, by straightning the Pores, that were too loose and open before, and contracting all the Nervous Systeme and Membranes of the Body, that were relax'd and render'd in a manner Paralytick by this over-Care to destroy otherwise perhaps

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old wet Sheets to Sweat them
n a Fever, as Dr. *Willis* tells us
n his *Pharmaceut. Rat. Cap. de Su-*
atione, was a Custom in Ireland;
nd my Worthy Friend Dr. *Bay-*
ard's own Experience on him-
elf confirms my Argument:
his Gentleman was the first
hat reviv'd this Old Custom
ere in *England*, defended it a-
ainst all the Ignorant and Intri-
uing Opposers, and by it has
one that Good to Mankind,

that he ought to be recorded as a Publick Benefactor.

N. B. By Perspiration I do not mean such an Evacuation as Men in Health have, but such an one as is occasion'd by a Putrefaction of the Humours, as we see in Fevers.

2. They are very nauseous to the Patient. 'Tis admirable Advice *Ethmuller* gives in general in all Diseases, That Medicines should be made as Palatable as possible; nauseous Medicines offend the Stomach, and disturb the Imagination; so that says he, *Minus metuenda talia, Ægri Palato hinc & Naribus accommodata si fuerint.* There is less Danger in Medicines whose Taste and Smell is agreeable. And a little after,

Quæ

*Quæ singulari Appetitu, atq; adeo
Voluptate assumpta sunt, Remedii
appropriatissimi ad instar, aut Diu-
urnas Febres, aut Chronicos Ventri-
culi Languores tollunt. Ethmuller de
Formulis in Genere, p. m. 139.*
That is, those Medicines which
we take with a *Gusto* and Plea-
sure, are most proper to cure
Lingring Fevers, and Chronical
Weaknesses in the Stomach. And
this I take to be the meaning of
that Aphorism of Hippocrates,
Sect. 2. Aph. 38. *Cibus & Potus
paulo deterior, suavior tamen, me-
lioribus sed insuavioribus est ante-
ponendum.* Victuals that are plea-
sant to the Taste, tho' coarse,
are healthier than Dainties that
are not so. And certainly no
Case requires more grateful and
D 5 pleasant

pleasant Forms than Fevers do, because of the uneasiness the Disease brings with it, and the frequency of the use of Medicine in that Case. I don't wonder that *Asclepiades*, who Liv'd near *Pompey's* Time, should get so great a *Fame* and Reputation by his Practice, that as *Pliny* tells us in *Lib. 26. Cap. 7. Universum prope Humanum Genus circumegit, in se non alio modo, quam si Cælo dimissus advenisset*; for his Medicines were all easie and pleasant, and he avoided all nauseous and rough Methods: I know some Persons by a Masculine Resolution will take any thing down their Throats, without any Reluctancy at all, because they have an Opinion 'tis good for them, and

and proper in their Circumstances and Condition; so large Bubbles of *Venice Treacle*, *Testaceous Powders*, &c. affect them very little whilst they are swallowing them; whereas others, and much the greater number too, can't conquer their Disgusts, and are very uneasie all the while they are thus cram'd with so unpleasant Doses; they take them 'tis true, because prescrib'd and order'd by the Physician, but 'tis with an utter Aversion both to Smell and Taste: And that which aggravates and heightens the Patient's Uneasiness is, that the ill Tastes and Smells of one Dose are hardly out of his Mouth and Nostrils, when, according to Order, the same is

to be repeated again, and so on every three or four Hours, during the whole Course of the Disease. Now a Fever alone attended with burning Heats, great Pains, continual Thirst, and dryness in the Mouth, almost constant Sickness at Stomach, Uneasiness and want of *Rest*, one would think brought Vexation enough with it; but over and above to be rack'd perpetually with nauseous *Bolus's*, and fiery hot *Cordials*, when they are almost roasted already with the scorching Heat of the *Fever*, is a great Calamity, and a very hard Fate upon Mankind, not so necessary and requisite in this Case as some have too fondly imagin'd: *Rest* and *Quiet* are the

two greatest Friends we have in Fevers; for the most part then, if not always, the contrary is injurious: But how can any Body rest that has always such ill tasted Relishes and Smells in his Mouth and Nostrils, especially when he considers, that the ungrateful Bolus and Cordial Draught he took last is to be repeated again every three or four Hours, as the Physician thinks *pro re nata* there is occasion? Besides all this, there is a large Cordial Julep made up of fiery, unpleasant, Empyreumatical, unwholsom *English* Spirits, to be taken every now and then, between whiles, when the Patient faints, which can't but be very often under so vexatious a Dispensation, which rather

ther increases than abates that Complaint, as I said before ; for certainly this must irritate and disturb the Animal *Spirits*, which 'tis very obvious are too much provoked already, and so by consequence are quite contrary to the Natural and Vital Indications of that Disease: Now these I take to be, *1st.* To temper the Acrimony and Sharpness of the Humours. *2dly,* To quiet and suppress the inordinate Fermentations in the Bloud, put a stop to its irregular Motion, and all the Disorders of the Spirits, that are occasion'd by its Indisposition. *3dly,* And *lastly,* To take off those violent *Heats* all over the Body which we commonly find

nd in *Fevers*; of all which more
t large hereafter.

Before I dismiss this *Topick*,
ive me leave to make one Re-
mark on our Cordial Waters in
he Shops, and that is this: That
ver since Brandy became so
scarce, and so very dear a Com-
modity, our Cordials are made
up of *English* Spirits, which car-
y off with them a very ungrate-
ful burning Oil, which is very
impalatable in the Mouth, sticks
o the Coats of the Stomach and
ntestines, and is not a little in-
urious to the *Patient*, as I have
more than once observed.

I would not here be misunder-
stood, as if I design'd to con-
demn all warm Medicines in *Fe-*
vers, for I know too well the
languid

languid Nature of some Fevers does require them; but then we ought to take care not to exceed in our Quantities and Doses, and to be sure that Cardiacks and Alexipharmacks are requisite in our Case to expand and excite the Spirits; for many times Nature is only oppress'd by a plenitude of ill Humours, which want to be alter'd and evacuated by a more temperate Method: A Mistake here is always attended with Dismal and Fatal Consequences, and is a Matter of great Consideration in the Cure of Fevers. The Learned *Ciresius*, who was Physician to *Lewis* the XIII. and Cardinal *Richlieu*, in his *Opuscula* p. m. 33. seems to intimate the same thing, in favour of what
I said

I said last, when he tells us, In some sorts of Cutaneous Eruptions in Fevers 'tis necessary to forbear Bleeding, but in others more necessary than Cordials or Alexipharmacks; and a cool moistning Diet, with a few Acids mix'd with them, are the most proper Remedy. For farther Satisfaction the Reader may consult the Author, Page aforesaid.

As I was Writing this *Essay* the latter end of *March* last I was sent for to a Gentleman of *Grays-Inn*, of between Thirty and Forty Years of Age, and of a very thin Habit of Body; the Case was a *Pleurisie*, attended with a small, soft, quick Pulse, and often Faintings, Symptoms very uncommon in Inflammatory Cases;

ses; however the violence of his Pains, *Fever*, and now and then spitting of Bloud, as also his *Asthma*, or difficulty of breathing, were all plain Indications that Bleeding was necessary; when the *Surgeon* came, which was about Nine in the Morning, with much difficulty he found a Vein, the Gentleman fainting all the time, and though he used all the Art he could, by pressing the *Vein* upwards to force it thro' the Orifice, yet could we not get above Eight Ounces of very fizy Bloud at that time; but by the help of some Glasses of good *Canary* which he drank off, and lying on the Bed, in little more than half an Hour the *Surgeon* open'd another *Vein*, which now
ran

n pretty freely, and we took
out Sixteen Ounces more,
which was as fizy as the former;
his he bore better than the first,
but remain'd still very low and
weak for some Hours after, and
the Afternoon was pretty hear-
y; the next Morning we took
from him about Sixteen Ounces
more, and the next Eighteen
Ounces, his Bloud still very fizy,
which encourag'd me to Bleed
him so liberally, for I had taken
from him in five or six days time
above 80 Ounces of Bloud, tho'
his Pulse continued small, soft,
and quick all the time; and by
his time I found his *Fever* was
gone, and his Pain of his Side
not so acute as before, though
enough of it remain'd to be very
trouble-

troublesom; so I then with some difficulty perswaded him to take a little Linseed Oil, which he did three or four times, taking near three Ounces at a Dose; in six days more he Walk'd abroad, and Din'd heartily at a publick Ordinary: In all the time of this Illness he scarce touch'd any Cordials, but drank very freely of Emulsions, and some other cooling Diluters, and now and then took a little *Sperma Ceti* in a Pectoral Syrup, or Sugar, and somewhat of a Linctus, which always stood by; every Night I gave him some *Diacodium* in a little *Cowslip* and *Poppy* Waters, which made his Nights pretty tolerable to him. Thus without the help of any Volatile Spirits, Cordials,

Cordials, (except a little Canary) Testaceous Powders, *Dens Aprugni*, and such like Specificks, he recovered, without any fear of *Empyema*, or any other of the dismal Consequences that often attend this Distemper. Nothing seems more Rational to me, than that emptying of the Blood-Vessels, and diluting its *Compages*, which at this time is too viscid, are the most effectual Means to prevent such Consequences in this Distemper.

To conclude this Argument, I must say, according to my Observation, Medicines ought in all Cases to be as palatable as possible, but especially in *Fevers*; and if in these Physicians would contrive to humour their Patients with

with pleasant Medicines, as they may for the most part do, I am very sure the Cure would be both more easie, and much more certain. There is a great deal of Pleasure in a Palatable Draught or Medicine, and the Pleasure it brings with it is a Refreshment to the Animal Spirits, and Cordial to the very Soul: And I wish it heartily, that Physicians, who take so little Physick themselves, because of the Nauseousness of it, would, in Compassion to their Patients, prescribe fewer Medicines, or more palatable Compositions. I remember, pursuant to this Rule, in the Year 94. at Cadiz in Spain Captain *Andrew Leake*, now Sir *Andrew*, (Knighted by the Queen for

for his Courage and Conduct at *Vigo*) was under my Care in a very irregular *Fever*; this Gentleman had labour'd under an ill Habit of Body for near about a Year before this happen'd, which had brought him extraordinary low, and had reduc'd him from a very strong Constitution and plump Habit of Body, to a meer *Skeleton*, Skin and Bones: That which I mention this Case for here in this place is, that being so low, I order'd him some Cordials now and then of our Cordial Waters aboard, which he soon took that Aversion to, that he abhorr'd the very smell of them, and assur'd me he would Die rather than take them; in the room of which,
(his

(his Constitution being broke)
 I gave him as a *Succedaneum*, a
 Julep made of Ship-Beer, and
 some of his own *Margate Ale*,
 which he lov'd mightily, and
 drank with a great deal of Plea-
 sure to the end of his *Fever*, and
 did well. This puts me in mind
 of Old *Gadesden's* Advice, in his
Rosa Anglica, Cap. de Febris, in
 this Distich.

Quæ petit Ægrotans quamvis con-
traria dentur,
Nam potius Natura viget, & Vo-
ta replentur.

What e're the Patient craves be
 sure to give,
 Tho' Contra's he require;

B.

By these Dame Nature sooner
will revive,
When she has her Desire.

And 'tis an undoubted Truth,
confirm'd by a World of Instances,
That what the *Patient* earnestly desires, tho' it seem improper to us, have often had Effects contrary to our Expectation, and should therefore most cautiously be cross'd. In a Word, of Medicines that are palatable, agreeable in Taste and Smell, refresh the *Animal Spirits* by the Pleasure they bring with them, are a Cordial to the Soul, and of greatest use in *Fevers*, as Authorities, Reason, and Experience seem to justify, then the warm *Regimen* in the Cure of

E Fevers,

Fevers, consisting of Medicines altogether contrary, must offend the *Palate*, disturb the *Imagination*, shock the very *Soul*, and become very injurious to the *Patient*.

3. They are not only prejudicial on the account of their ill *Tastes* and *Smells* they bring with them, but they are also equally injurious to the *Stomach* and *Intestines*: The *Organs of Tasting* are plac'd in the *Mouths* of *Animals* as so many *Centinels*, or *Out-Guards*, to suffer nothing to pass from thence into the *Stomach* that may be injurious, they being the proper *Judges* of what is or what is not agreeable to the *Animal Oeconomy*: These *Organs* are very exquisitely sensible
in

in *Brutes*, who will eat or drink nothing that is not pleasing to their Palate and Smell; and 'tis their Instinct teaches and informs them, that what is not so, will offend their Stomach, and prove of ill Digestion and Nourishment: Certainly our Experience tells us, what relishes well in our Mouths, and sits easiest in our Stomachs, is of light and quick Digestion, and for the most part affords the best and most wholesome Nourishment. Now what I say here of Food I may assert of Medicine in *Fevers*, the pleasanter 'tis, the better it is taken, always agrees best with the Stomach, and the sooner it is transmitted thro' all the Stages it has to go to the Mass of Bloud, in

order to such Alterations as are to be made there: What then can we judge of the vast quantities of *Testaceous Powders*, *Theriac*, *Snake-Root*, *fiery Spirits*, &c. that are not only ungrateful to the *Tongue* and *Palate*, but to the inner *Coat* of the *Stomach* too, which is one continued *Coat* with that of the former, lies as a *Load* and *Weight* on it, and by their actual *Heat* are at last almost parboil'd; the little *Acid* that was left, and might have been of use to the *Patient*, is quite destroy'd, and all the *Juices* in the *Stomach* so confounded, that the *Patient* is always *Heart-sick*, faint, and languishing, and at last exalting the *Bloud* and *Humours* to such an *Acrimony*,
assisted

assisted by the pungency of the Medicines, stimulating the inner Coat of the *Stomach* and *Intestines*, they cause first Vomitings and Loosnesses, a little after *Hiccups*, and at last *Universal Convulsions* all over the Body, which frequently end in *Death*. If any such Patient chance by great Accident to recover out of his *Fever*, attended with all the ill Circumstances mention'd, he may be truly said to be sav'd so as by *Fire*, with all the Difficulty in the World, and contrary to Expectation. I will not say but these Complaints may, and do arise sometimes, tho' but seldom, from the Nature of the *Fever*, and the Acrimony of the Humours, but I am very confident they are too

too often occasion'd by preposterous *Art*. 'Tis a Practice I have observ'd very unsuccessful some Years, and tho' some may Live under a very warm Dispensation in a *Fever*, yet many Die under the warm *Regimen* of Testaceous Powders, Cordial Spirits, &c. who in all probability might with half the *Pains* and *Tortures* have surviv'd their Distemper. Nor is the Patient in *Galen*, *Lib. 1. Cap. 17. ad Pisonem de Theriaca*, the only Person that has Died of a Busie-Body; these warm Medicines while in the Stomach give such a shock to the *Animal Oeconomy*, that Nature in a Hurry is quite confounded, and knows not how to make her Discharges; she has, 'tis true, many
Outlets

Outlets for what offends, but the Disorders are so great within, that no regular Separations can be made; the *Juices* of our Bodies are all so chang'd from their *Native Mixture* and *Fluidity*, they are unfit to pass those *Excretory Ducts* design'd by *Nature* as *Common-Shores* to carry off what offends.

I must allow that in some *Fevers* the *Spirits* are very low, and a *Cordial* will be necessary now and then to support them; but then I take *Liquids* to be better than *Solids* in most Cases, good *Broths* and *Gellies*, impregnated with some *Cardiacks*, will be of much more use, and sit easier and lighter on the *Stomach*, than *Testaceous Powders*, *Venice-Treacle*,

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Treacle, Bezoardicks, or any Orvietans whatsoever; tho' in some Cases we allow a Bolus of that kind once a day, and sometimes, and but seldom, twice in 24 Hours, and never more. Thus *Hippocrates de Morbis acutor*, Sect. 51. allows of more solid Medicines in the Hiccup Fever, in which Case he advises the Cyrenaick Juice, or Silphion, mix'd with Daucus Seed and Galbanum, Honey and Cummin-Seed, for a Lohock, drinking a little Ptisan after it: And I remember that Learned Commentator *Prosper Martian* gives this Reason for it, *Ut Ventriculo majorem Opem ferat, ne cito ad venas transeat, & Febrilis calor augeatur.* There are in Fevers great varieties of Appearances

ces and Symptoms, which *pro*
e nata must be treated with cau-
tion. This makes *Hippocrates*,
Aph. 64. *Seēt.* 5. advise the use
of Milk in long and languishing
Fevers, but no others; and *Quin-*
us Serenus, who lived in *Pompey's*
time, for the same Reason advi-
ses Cockbroth in lingering Fevers,
Cap. de Feb.

Febribus at longis Galli nova Jura
Vetusti
Subveniunt; Tremulis etiam Medi-
cantia Membris.

And *Plato* in *Timæo* tells us, in
such stubborn Cases Diseases are
better manag'd by Diet than
Medicine: For my own part, I
have seen a Glass of good gene-

rous Wine and Broths answer all Intentions in these Cases better than any Medicine whatsoever.

But tho' we may allow solid Medicines now and then in *Fevers*, yet I must confess I see no reason at all to admit these hard Mineral Substances in the Cure of Fevers, but rather to reject them; other Solids after some little time they have been in the Stomach are dissolv'd, and so carried off, these remain for the most part in the Ventricle, and *primæ viæ*, where, after they have rubb'd off the *Velamentum Bombycinum*, are continually vellicating, pricking, and galling the next Coat to it, which being Nervous, and very sensible, creates a great deal of Sickness and

Anxiety

Anxiety there, the common Complaint in this Case, as every Body knows; and this is the reason of the burning Heat so much complain'd of, especially when the Patient swallows his Powders and Cordials: This was confirm'd to me by my Worthy Friend Dr. Tho. Rolfe, a true Son of Hippocrates, and Learned in the Ancient Physick Authors, who assur'd me he was at the Dissection of a Person that died of a Fever, who, by order of his Doctor, had taken great quantities of Testaceous Powders for several days together; upon opening of his Stomach he found the *Velamentum Bombycinum* quite worn away, and good quantities of the Testaceous Powders he had

had taken lay in hard Lumps like Sheeps Dung in the Stomach and some of the Intestines; for this Reason I am very cautious how I give these Powders, which are to lye there all the time of the Fever, not to be purg'd off at all.

I would not be understood by any Body as if I altogether decry the use of all Testaceous Powders, so much in vogue now-a-days, and thought, as some do, who pretend to be Reformers of Physick, that they are *Poysons*, and not *Medicines*; no, I leave all such *Chicanes* as these to those that affect to be singular, in order to cheat the silly World, that knows no better; whoever prates after this manner can know nothing

thing of the *Animal Oeconomy*, which sometimes requires what we call *Acids*, and sometimes the *Alcalies*, *pro re nata*; these are both good in their turns, nay, both together handsomly united suit more Constitutions than either alone, are the kindest and most natural Medicines we have. Lord! if *Alcalies* are Poison, what shall we do in Womens and Childrens Cases, and some other I shall not name now, in which they seem to be in a manner Specificks, and of great use to Mankind? If the whole Tribe of *Alcalies* must be banish'd and excluded, what shall we do in the Cases aforementioned? Sure I am Pins and Needles made up into a Bolus will prove as good
in

in these Cases, as any of the best of their Acids. 'Twou'd make ones Bloud boil to hear such dangerous Notions, scatter'd up and down among Apothecaries and their Cubs, because of the Liberty they take in this Licentious Age, of practising Physick among their Acquaintance, which may be of ill Consequence to the Publick: And to maintain Acids are proper Medicines in all Cases, and Alcalies good for nothing, is as great a Paradox and Heresie as ever was publish'd to the World; but Hereticks in Physick as well as in Religion may be sure to make a Party among the Ignorant, if, like Mountebanks, they broach but their Doctrines with a great deal of Noise,
and

and a more than modest Assurance. Had our Modern Authors but read and consider'd what Mr. Boyle in his Treatise of the producibleness of Chymical Principles, and Bohn in his *Dissertationes Chymico-Physicæ*, have said on the Doctrine of Acid and Alkali, how convertible they are one into the other, by the different degrees of Heat they pass thro' in an Operation not very difficult to be made, they might have known also, that according as the Specifick Constitutions are, Acids being first alter'd by the *Native Menstruum* in the Stomach, may in the Bloud be exalted into an Alkali, and Alkalies by the same Rule may be converted into Acids; for this

Menstruum.

Menstruum being a true Chymical *Alcabeſt*, reduces all Bodies it is incorporated and intimately mix'd with, *ad minima* to their firſt Principles, or *Atoms*, before it leaves off acting on it; and then they are as capable of being any thing elſe as what they were before. So that both are of uſe to an intelligent Perſon, and both dangerous Edge-Tools in the Hands of Ignorants. Conſonant with what I have ſaid, is that Expreſſion of a late very great Author, *Ramazini*, in his Learned Obſervations on the different Constitutional Fevers of ſeveral Years at *Modena* in *Italy*, p. m. 46. *Reor itaq; ex Medicamento aſſumpto, & ſuccis quibus commiſcetur, gigni novum concretum, e quo illæ*

llæ Operationes, quæ postea consequuntur promanant, & quæ solius Medicamenti Efficaciæ solent ascribi.
 Which is exact to my Purpose, and may serve as a Check to all bold Assertors of Principles, and such as depend on one Medicine, without any regard to the different Constitutions to be met with from some secret Dispositions in the Air unknown to us.

But I shall now wave all farther Prosecution of this Matter in this place, and leave such Men *Agere Histriones*, as they find for their Interest, and the giddy and admiring Crowd to be chous'd, as they deserve, of their Lives and Estates. And now I return to my Argument again where I left off last. I do not, I say,

say, decry the use of Testaceous Powders altogether, yet I think they do too much, who cram their Patients with them six or eight times a day, from a false Notion they have got of an imaginary Malignity they have to encounter, which for the most part happens more from the Medicines that are given, than the *Genius* or *Nature* of the *Disease*; or else they pretend some *Acid* or other is to be absorb'd in the Humours and Blood by these *Alcalies*, and that upon this account all Acids would be pernicious; but would these Men but consider well the Pathologick part of Physick, and the History of Diseases, this will prove a meer Mistake, and they will find

d that Acids are not so much
be blam'd in these Cases as 'tis
commonly taught; they are
much more pleasant every Body
must allow, and sit easier in our
Stomachs than any sorts of Alca-
lis do in most Cases, which
when alter'd by the Juices they
find there, pass afterwards into
the parts of our Bodies, and
be a Curb to the exalted Hu-
mours and *Ferments* in the Bloud;
upon this they are more proper
for the most part in *Fevers* than
Alcalies, which are not compa-
rably so pleasant to the *Palate*
and Stomach as Acids are: For
my part I have a very tender re-
gard to the Stomach or Ventri-
cle, the primary Receptacle of
Food and Nourishment, and
a prin-

a principal part in our Animal Oeconomy: This is that part which the Learned *Helmont*, from the great Uses it has assign'd it, Honours with the Dignity of the Seat of the Soul, supposing it to be the *Noblest* part of the *Microcosm*: And our Authors do allow, all Errors here of the first Concoction are seldom or never mended in any subsequent Digestions afterward. Now if the Stomach be of that Consequence to the Man, what Care ought to be taken how we injure or offend it; especially because of the influence it has upon the whole, all other parts depending upon its good or male-Administration, and are sure to fare well or ill, as that happens to do its Duty,

uty, and discharge its Offices?
But if the Testaceous Powders,
consisting of gritty, stony, hard
particles, do by their ruggedness
abrade and rub off the *plushy li-*
ng of the Stomach, which
would defend the inner Coat
from the Injuries of solid and
hard Meats, whose immediate
contact would offend and irri-
te it, then must these Powders
be offensive to the Stomach on
both these Accounts, as not on-
ly robbing it first of its *silken*
down, and the Juices separated
from the Arteries by it, which
have their use too, but also as it
irritates constantly on the inner,
nervous, and very sensible Coat,
causing great Heart-burnings,
Sore, Anxieties, Sickneses, Hic-
cups,

cups, Convulsions, &c. all which are not a little aggravated by the addition of warm Cordials usually given, which wou'd have done less hurt had they given Gruel or Barley-Water in their room; these things put together plainly prove the warm *Regime* injurious to the Stomach and Intestines, and as such in all probability pernicious to the Patients. It may be objected, if this were true, then Jesuits Powder the most nauseous Medicine in the Shop, and taken in great quantities would also be injurious to the Stomach. I answer The Jesuits Powder is a Vegetable, of yielding soft parts, a good part of which dissolves in the Stomach, and the rest are soon

soon carried off by Stool, never doing more certain Service than when it keeps the Body open, as I often observ'd; but the Terebinthaceous Powders lye in the Stomach and *Primæ Viæ*, or Intestines, the whole Course of a Distemper, and being of a hard, gritty, stony Substance, affect the Stomach and Intestines, as I said before.

4. And lastly, The warm Regimen is prejudicial in Fevers, because it disturbs Nature in her way to a regular Crisis. Dr. Sydenham tells us, *Morbum nil aliud esse, quam Naturæ conamen Materiae Morbificæ exterminationem, in Egri Salutem omni ope molientis,* (i. e.) A Disease is nothing but an Attempt of Nature to throw off

off what offends, and this when effected is call'd a *Crisis*.

I shall not here entertain my *Reader* with all the Critical Remarks made by the *Antients* in acute Distempers. *Hippocrates* in his Works has said much on this Subject, no question no more than he found was true: But whether such Crises happen in our *Climates* as did in the warmer Countries of *Greece* and *Asia* is a matter of doubt; however beyond all peradventure *Nature* is the same in all Countries, and Crises, tho' less perfect, would happen among us as well as them, if they were not disturb'd by unseasonable and improper Medicines, which interrupt and divert the Design.

The

The *Antients* troubled their Patients with very little Physick, because they knew *Nature* was *Morborum Medicatrix* ; Bleeding and a Clyster was allow'd at first, and afterwards a Ptisan, or Barley-Water, was their constant Diet; thus was the whole Work committed to the Care of *Nature*, and a successful Crisis follow'd by Sweat, Stool, or Urine, soon after; whereas we in *England* by our Irregularities at first, and very often repeated warm Doses in the Course of the *Fever*, imprudently and unseasonably prescrib'd, sink our Patients so low, that 'tis impossible almost to expect that Humours thus confounded and disturb'd shou'd ever be dispos'd to a regular or

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natural

natural Despumation or *Crisis*; but toss'd to and fro, and always in a hurry, the Matter is translated from one part to another; and that Fever, which probably would have ended in a kindly *Crisis* in a few days, is at last by this preposterous Method render'd Chronical, Malignant, and Fatal.

This Dr. Morton tells us, *de Feb.* p. 273. he had often observ'd, *Fevers* which at first have appear'd to be of a mild and benign Nature, remitting or intermitting, and have afterwards by ill Practice become not only continual, but also malignant and pestilential: And I my self have frequently seen *Fevers*, attended with the worst of Sym-

toms

toms, by good management in the beginning brought to such a kind Remission in a day or two, as required only the *Jesuits Bark* to perfect the *Cure*. That very much depends on the first Conduct in *Fevers*, is an undoubted Truth, and all Errors here are with a great deal of difficulty to be remedied afterwards: So that, whatever some may think, we can never be too cautious at the beginning, and every Apothecary with his Pearl Cordial and Bezoardick Powders, is not fit to treat a Patient in the beginning of a Fever, tho' the Symptoms are gentle and the Complaints are few. I wish some Men wou'd consider this; and modestly forbear being over-Officious where

they are not qualified to serve; for tho' they may practise according to what they have seen done by some Eminent Professors, and the Medicines they prepare may look well, and have very plausible Titles and Labels belonging to them, yet he must know little that knows not, that's the least part of Physick; the Animal Oeconomy and the Specifick Constitution of the Patient are chiefly to be consider'd; we ought at this time judiciously to weigh, *Quid Natura faciat aut ferat*; and I am apt to think a regular Physician is more likely to understand that part, than any conceited Pretender whatsoever.

To the Arguments foregoing, give me leave to add one accidental

dental Inconvenience that attends this sort of Practice by the *warm Regimen* in Fevers, and that is, That this *warm Regimen* is very chargeable to the Patient, and brings a Scandal on Physick. Fifteen, Twenty, Thirty Pounds is a great deal of Money, and all for Bezoardick Powders, Cordial Draughts, &c. which might better have been omitted: And certainly these extravagant Charges are a Prejudice to the Apothecaries, yea, the Physicians too, whatever some may think, that are in the Secret. Many Patients are frighted from the use of Medicine, as well from the Apprehensions they have of the Charges as the Nauseousness of the Doses prescrib'd. For my
F 3 own

own part, I never expect to see the Noble and Useful Science of Physick wrested out of the Hands of Empiricks, Old Women, and Mountebanks, till regular Physicians, studying only the Patients good, will honestly write short Bills, more pleasing Doses, and less chargeable Medicines. And here perhaps my Reader may expect I should enter into the Detail of the present Dispute between the Gentlemen of the Dispensary and the Apothecaries; but as I espouse no other Interest but that of the Patient, I trouble not my self with any of those Quarrels; I am not one of those that would run down a Body of Men, whose Ministry in Physick I think of great use to the Patient
and

and *Physician*, nor am I of Opinion their Visits are impertinent, when they attend the *Patient*, and see Directions followed; these things cannot be so well given to a Maid, a Nurse, or a Wife; besides, Accidents may happen that they may observe now and then, which the *Physician* should be advis'd of, in order to his considering what is further to be done, and may concern the Life of the *Patient*. I wish, 'tis true, some things were regulated, and some Abuses, crept into *Physick* within a few Years time, were remedied, because injurious to *Societies*, and pernicious to Mankind; but so much do Craft and Interest prevail, that I don't so much as expect to see any of
E 4 those

those Grievances redress'd, of what Advantage soever to the Publick it might be to have them so. I must confess I am of Opinion, that Physick practis'd by regular *Societies*, as I have seen it in Foreign Countries, would be more advantageous to the Common-wealth, in preserving the Health and Lives of the *Subjects*, than by a free Toleration of every Body to practise on the Constitutions of the People.

Divinity, Law, and Physick, are reckon'd the three Liberal Sciences; the two former have their Palisado's and Intrenchments round them, so that no Body dares pretend in their *Halls* or *Pulpits*, but what are fairly Initiated, according to Form and
Custom;

Custom; but the Cobweb Fences of Physick are invaded every day, and any broken *Hofier* or *Merry Andrew* dubs himself a Doctor *ex tempore*, and sets up for an *Æsculapius*: Not that I would pretend to abridge any Man of his Natural Right, to use any Body he pleases, *Apothecary*, *Old Women*, *Mountebanks*, or *Astrologer*; every Man is *sui Juris* in this Case, and ought not to be controll'd, when he acts his own Will and Pleasure, and not the Dictates of another; if he is pleased with the Risque he runs, what has any Body to say in contradiction to his Humour? and when he submits to his *Fate*, all is over and at an end.

The Charges this Method brings with it is not the only Inconvenience that attends it, because it often brings a Scandal too on the Practice of Physick, when the Bill comes to be paid, for the nauseous Bolus's and burning Draughts; tho' the Patient recovers, yet he is surpriz'd at the Sum, and being out of Humour is ill-natur'd enough to suggest, That the Quantities and Qualities of the Medicines were order'd more for the sake of the Apothecary than the Patient: That the Doctor had not prescrib'd so largely, had it not been to please the Apothecary that call'd him in, or at least that the Doctor and Apothecary go Snacks in the Bill.

I have

I have heard it said there are such Combinations amongst some of the *Faculty*, but hope there are no such forlorn Men of our Number. He that intrusts his Health in his Physicians Hands, commits to his Care the greatest and most valuable Jewel he has, lyes at his Mercy, and wholly relies on his Judgment and Humanity: Now to betray so great a *Trust* as this is, not to use such a Confidence as this must be, with *Friendship*, good Nature, and all imaginable Compassion, is a Crime of the first Magnitude. *Hippocrates* advises, That a Physician should by no means love Money, because of the Temptation he might lye under, to mind his own Interest

more.

more than that of his Patient. Were this observ'd in *England*, there would not be so much difference between Dr. R... in the first Class and Dr. C... in the last of Drs. So much the Craft of Physick prevails above the Art of so useful a Science. *Pudet hæc Opprobria.*

To come to a Conclusion of this Argument, and sum up all in a few Words, let the Cause of Fevers be what it will, this Practice cannot be good. For, 1st. If the occasion of a Fever be from the too exalted State of the Bloud, what can be expected from a warm Method, but a higher Exaltation? 2. If from any incongruous Particles from without, the Ferments of the Bloud
are

are vitiated, and irregularly moved, upon this occasion more of this *Febrile Matter* must be assimilated, the Bloud and Humours being hurried on faster by the warm Medicines, and by consequence all the Symptoms must be increased and aggravated. And lastly, if a Cold checks our *Perspiration*, suppresses any of the necessary *Evacuations* to be made, and causes a fulness in the Vessels, and a disorder in the Body, who cannot but suspect a greater Confusion will follow Alexipharmacks and warm Cordials?

If any will tell me this is not the Practice of the Town at present to give such Medicines in the *beginning of Fevers*, but only towards the end, when the *Spirits* are

are low, the *Pulse* weak, and the *Patient* ready to faint and sink under the *Malignity* of the *Distemper*. I answer, whoever will examine the *Files* or *Patients Bills* last Year will soon be convinc'd, that 'tis hard to be a Favourite in this *City*, without the plentiful use of *Pearl Cordial*, and *Bezoardick Bolus's*, and that in *Fevers* of all kinds from beginning to end. *Sic itur ad Astra*. Tho' after all, no *Temptations* of any kind, but the *Welfare* of the *Patient*, should ever tempt any *Body* to give more *Physick* than he thinks is necessary.

I have all this while said nothing of the *Horrors* and *Rigors* that usually preceed the *Efferescence* and *Heat* of *Fevers*, and

I shall

I shall say but little here, for these two Reasons. 1. They are no necessary, but only an accidental Phænomenon of a *Fever*, for many *Fevers* have no cold Fit at all. 2. Such cold *Shiverings* as these, often happen on very slight Occasions: So any thing biting or pungent on the Habit of the Body, causing Pain; a *Caustick* upon any part, as *Galen* has observ'd it; cold or hot Water sprinkled on us; any sudden Fright or Surprize, will bring them on us in an Instant, without any *Fever* at all. Now whether they are occasion'd from a Contraction of all the Capillary Vessels in the Habit of our Bodies, or else from a Spasm of all the Membraneous parts together, the Soul

or *Archæus* shrinking at this time, and the Animal *Spirits* not expanded to all the parts of the Body, as at other times, I shall not take upon me to determine; only incline to the latter, because the Pulse in this Circumstance is low and quick, which argues the Bloud Vessels at this time are contracted, which wou'd hardly happen, I conceive, if only the *Capillaries* were concerned. 'Tis for this Reason, in a violent Fit of *Anger* the Face looks pale, and a sudden *Fear* causes a cold Trembling all over the Body.

In the next place a word or two about *Blisters*, and I shall conclude my first Part. I know very well there are some *Profes-*
sors

sors of Physick cry up the use of
Blisters in all Fevers, and others
run them down, as not only
good for nothing, but danger-
ous too: A Wise Man may go
between these two Extreame, and
use them *pro re nata* for the relief
of his Patient as there may be
occasion. I remember Dr. Mor-
ton, *Lib. de Feb. p. 330.* says,
that the chief use of Blisters is,
Quod partes, subjectas corrodant,
& inflamment, atq; consequenter
Diatthesin Inflammatoriam. Massæ
Humorum impertiant; Spiritus au-
tem ab hac Inflammatione Artificiali,
non possunt non pro Tempore expan-
di & excitari, (i. e.) they cause an
inflammatory Disposition in the
Bloud and Humours, in order
to expand and raise the Spirits.
I know

I know very well that *Blisters* give a very useful Diversion to the Humours in Catarrhal Fevers, which are generally attended with an inflamed Bloud. Now if the Doctors Ratiocination were true, this would be adding Fuel to the Fire, and what is applied as a Remedy would but aggravate the Disease: But the manifest Advantage we find from them, especially in the Cases before-mention'd, plainly prove there are other Reasons for the use of *Blisters*; some of which perhaps may be these following.

1. As a Caustick they divide the Scarf or outward Skin from the Skin, open the Mouths of the Vessels, and discharge a watery Humour out of them, by
which

which the parts adjacent chiefly are reliev'd. So a *Blister* in the Neck makes a plentiful Evacuation there, and the *Nervous Fibres* of the *Head* being all hollow, (as all *Fibres* are) and communicating with these parts, throw off some part of what offends them this way.

2. 'Tis probable in a Fever all the *Lymphatick Juices* of our Bodies are thicker than ordinary, as I said before, and the *Head* is on this account very much affected, from Obstructions in the *Fibres*, which stretch them beyond their proper *Tone*, and cause those acute Pains we feel in Fevers: For this Reason *Blisters* cannot but be useful, the finer and most active parts of the *Cantharides*.

tharides piercing thro' the Membranes, passing into the Bloud thro' the Bloud-Vessels, and mixing with the *Lymphatick* Juices, must incide and attenuate them, and so render them more fluid than they were before.

3. Another use of *Blisters* may be this, that they by the acriminous pungent Particles of the *Spanish-Flies*, do vellicate and irritate the Fibres of the Membranes of the Body, which at this time have in a great measure lost their *Tone*, and in a more particular manner those of the *Brain*, the Root of the Man. The frequent Twitchings at the end of Fevers, the little Convulsions and Subfultus's are not truly Spasmodick, from a too great
Cris-

Crispature of the Membraneous Fibres, but rather seem to proceed from a Paralytick Disposition of the Nerves at that time, or *tremor*, an irregular Motion of their Juices, disorderly Thought, and a wavering Mind. By this means, as a *Stimulus*, the progressive Motion and Circulation of the *Animal Spirits* or Nervous Juices, may, and all other Juices too, are promoted, and carried on to all the parts of the Body. 'Tis for this Reason, I take it, Experience having taught it us, we apply these Plaisters to the *Nape* of the *Neck* first, and so by degrees to the remoter parts.

Now the *Head* being so principal a part, the *Seat* of the *Soul*, the first *Spring* of *Sensation*, *Motion*,

tion, and Nutrition, being begun here, all the Disorders that happen in this part cannot but in a very special manner affect all the other parts too: And upon this Account 'tis, I believe, that Blistering-Plaisters applied thus, do not only operate on the part they are immediately applied to but the adjacent also soon after, and so become of Universal Use to the Animal Oeconomy.

4. And lastly, They are of use, as they have a peculiar Diuretick Quality in them, which discharges some part of the peccant Matter in a Fever by Urine and so may be of no small relief in Fevers. So that for these Reasons I am not for exploding Blistering Plaisters *ex Foro Med*

o, as either useless or dangerous
n the Cure of Fevers, tho', I con-
ceive, where they are well treat-
ed in the beginning, for the most
part there will be little or no oc-
casion for them afterwards. And
there is this farther to be noted
on this Subject, That there are
several Constitutions or Habits
of Body that will not bear Bli-
sters, so that they ought to be
used with all Caution and due
Consideration. The Learned
Baglivi has Writ an Admirable
Dissertation *de usu & abusu Vesi-*
cantium, to which I refer my
Reader for further Satisfaction
on this Head.

SECOND PART.

IT requires no great Skill to pull down the Noblest *Fabrick*, but he must be an *Artist*, and well vers'd in all the *Rules* and *Orders* of *Architecture*, who performs well in the *Art* of Building, and raising new *Structures*, which can stand the *Test* and *Censures* of the *Criticks*. Thus 'tis not enough that I have endeavour'd to overturn and explode one Method as injurious, unless I can propose a better of my own, that may be

be more useful to Mankind. In order to this it may not be amiss here to enquire first, What the Notions and Practices of the *Antients* were in the Case of Fevers. And I am the more willing to entertain my *Reader* with some short Account of their Proceedings herein, because they seem not a little to favour what I argue for, and shall gladly shelter my self under their Protection and Authority, as the honestest and best Proficients in the *Art of Healing*.

'Twou'd be an endless Labour to recite all the various Opinions *Physicians* have entertain'd of the Causes of Fevers, and their particular Cures, designing only an *Essay*, and not a finish'd com-

pleat Discourse: I shall therefore content my self with mentioning only some few, and those the most Considerable and Famous, as sufficient for my present Purpose. And the first I shall begin with is my good Old Master *Hippocrates*, of whom the Great *Macrobius* gives this Character, *Tam fallere quam falli nescit*, p. m. 27. That he knew not how to deceive any Body, or be imposed on himself. And the never-enough admir'd *Baglivi* tells us, *Nature non Hominis Voce loquitur Hippocrates Medicorum Romulus, cui Aetas prisca non vidit parem in re Medica, nec visura est futura.* That hitherto he has not had his Fellow in the Medick Art, nor are we hereafter to expect his equal

equal. This so Celebrated an Author in his Book *de Flatibus*, is of Opinion, That all Diseases in our Bodies are much of the same Nature, and differ only according to the place affected; and that *Air* is the Cause of all our Distempers, as well as of our Life. Every one knows, says he, without the Benefit of the *Air* we can subsist but a very few Moments, tho' without Food we may some Days: So 'tis plain our Life depends on the *Air*. And that Diseases arise from hence too, he proves thus. Either we have too much or too little *Air*, or else we receive it in too thick or too thin, or perhaps it alters or corrupts our Bodies by some noxious or destructive

Particles it brings with it. Now to illustrate this Position of his, That all *Diseases* arise from the *Air*, he begins with *Fevers*, as the most common and obvious Instance he could hit upon, being usually the Companion of most of the great *Distempers* that afflict Mankind; of these he says there are two sorts, the one a general, which we call the *Plague*, and the other a particular *Fever*; and both these, according to our *Author*, are occasion'd by the *Air*. 'Tis plain he thinks the *Plague* becomes general, because we all breathe the same *Air*, and there being a Likeness and Similitude in our Natural Constitutions, from hence 'tis probable we are equally affected with it.

And

And because *Brutes* have a different *Nature* from ours, they have their *Plague* too, peculiar to their own *Kind*. Now when the *Air* carries with it such *Particles* as have a *Venom* in them pernicious to our *Natures*, we only are affected with it: And thus it fares with all other *Animals* in their turns: An Instance of this is very fresh in every *Bodies* Memory, when our *Horses* only were infected and sick in the Year 99, and no other Beast at all: And these *Plagues* may affect this or that *Town* or *Country* from some malignant *Effluvia* or *Vapours* from the *Earth*, that may not at all be felt in the *Neighbouring* parts. These things *Divine Hippocrates*

takes to be self-evident from common Experience and Observation. *Vid. Sect. 15, 16, &c. Lib. de Flat.*

In the next place he proves his second Assertion, That the particular *Fevers*, and all other *Diseases* too, proceed from the *Air*: For, says he, we observe no Proportion in our Eating, either our *Food* is too dry or too moist, and we make no amends for it by Exercise; or else we feed on several sorts of Meats, of a very different *Nature*; these occasion *Disorders* in the *Animal Oeconomy*, one digesting sooner, the other later. Now he thinks it highly probable, that different *Airs* do enter into our Bodies with the varieties of our *Food*, which

which flying thro' all parts, at last fall upon the Bloud-Vessels in the Habit of the Body, and cooling them, are the cause of the *cold Fits* in the beginning of the *Fever*; thus the Bloud retired to the center of the *Viscera* to avoid the *Cold*, causes Inflammations, and a *Fever*, by reason of their fulness; it being impossible so much Bloud crouded into so small a compass should remain in quiet; this *Air*, which cool'd before, being now conquer'd by the *Heat*, the whole Body becomes inflam'd, and all of a *fire*; hence come all the *Disorders* we observe in the *Humours* and *Solids*, the Pains and Anxieties that follow upon it; and all from the *Elasticities* of the *Airs* included

in the Vessels, the Irregularities of their Motions, and the Obstructions they meet with.

I remember our Divine *Author* tells us in another place, *Lib. 1. de Morbis, Sect. 5.* That the Origin of *Fevers* was from an inflammation of the *Gall* or *Phlegm*, and from hence the whole Body was inflam'd, and in a *Fever*; this he is of Opinion may happen sometimes from what we eat or drink, sometimes from *Fatigue* or *Wounds*: But this, I presume, is to be taken in a Secondary, Consequential, or Symptomatical Sense, and not in the least contradictory of the former *Theory* laid down.

Thus have I given you the Sense of the Great *Hippocrates*,

according to the best of my Understanding, and with all the Brevity I could. I have dwelt the longer upon his *Theory*, because he is the first *Author* we have among our *Records* in *Physick*; and I wish I could say any Body since him has given us a more Rational Account of *Fevers*.

Galen is of Opinion, that the *Essence* of *Fevers* consists in a *præternatural Heat*. *Vid. Meth. Med. Lib. 11. Lacun. p. 117.* And that this *Heat* is sometimes in the *Spirits*, sometimes in the *Humours* or *Juices*, and sometimes in the *solid parts*: That a *Corruption* or *Putrefaction* is occasion'd by *Obstructions* in the *Pores* of our *Bodies*, hindring thereby *Perspiration*,

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ration, and keeping in those fuliginous Superfluities that ought to have been discharg'd that way: Hence comes so great a Plenitude in the Vessels, *Putrefaction, Heat, and Fever*: This is what he calls a *putrid Fever*, being of a much milder Nature than what we call *Pestilential*, which he agrees with *Hippocrates* is occasion'd by some secret ill Qualities in the Air.

Thus all the Ancient Greek Physicians after *Galen* and *Hippocrates* plac'd the Essence of Fever in a *praternatural Heat*. *Soranus Trallian* tells us, the Essence, Nature, and Substance of Fevers consists in a *praternatural Heat*. *Vid. Trallian Lib. de Febribus, Cap.* And *Ætius* in his *Tetr. 2. Sermon*

1. *Cap. 74.* is of the same Opinion; as also *Nonnius* and *Ægineta*, as any Body may be satisfied by the Authors themselves. *Vide Med. Art. Princip. Hippocrates*, who seems rather to express the manner than the Causes of Diseases, calls it in *Lib. 3. Epidem. Cas. 1, 2, 3, 4, &c.* a Fire; and Fire and Fever with him are Synonymous, and all one. And *Plato* in *Timæo* towards the end says, a continual Fever is an excess of Fire. So much for the Old Greeks; the *Arabians* come next to be consider'd.

About the Sixth Century, in the Reign of *Justinian*, an Universal Ignorance prevail'd every where, and *Physick*, among the other Arts and Sciences, remain'd unculti-

cultivated and neglected, till about the Ninth Century, and then it began to be encourag'd by some Caliphs, who had a Love for Learning, and caus'd it to revive among the *Arabians*, *Jews*, and *Saracens*: And King *Almansor*, to carry it on the better, erected Schools and a Library at *Maroccho*, where there was a great resort for some Hundreds of Years, of Men of Learning in the Science of Physick, as well as others. And tho' 'tis not at all to be doubted, but there were many Learned Men Famous among them during the Four Hundred Years Learning flourish'd in *Asia* and *Africa*, yet few of their *Authors* are come to our Hands recorded by *Mesue Sera*

pio, and others; however those we have, all follow the *Greek Physicians* mention'd in this Point. Thus *Avicen* Cap. 1. de Feb. *Febris est calor extraneus in Corde accensus & procedens ab eo Mediantibus Spiritu & Sanguine per Arterias, & Venas in totum Corpus.*

And *Isaac the Jew* gives this Definition of a Fever, in Cap. 1. de Febribus, That 'tis *Calor innaturalis a Corde exiens, &c.* I shall add no more Authorities, for Brevity sake, but desire the Learned to consult the *Authores Antiq. de Feb.* where any one may be satisfied, that the *Old Arabians* generally agreed with the *Greeks* in their Opinion concerning the *Essence* of a Fever. The *Old Latin Physicians*, who being most

most of them of the *Empirick Sect*, reason very little or nothing about the *Causes of Diseases* are silent here; but whoever will look into their *Method of Practice*, may see their *Notion* was much the same with the *Greek* and *Arabians*. Thus *Celsus* orders plentiful *Draughts* of cooling *Liquids* in a *Fever* to be taken *ad nauseam usq;* to use his own *Words*. And that *quintus Serenus* and *Plinius secundus*, who lived above 1500 Years ago, were of the same *Mind*, may be seen plainly by their temperate *Externals* and *Internals* in the *Cure of Fevers* in their *Works*. 'Tis not easie to trace the *Original* of the warm *Regimen*, so as to determine when it first began in the *World*.

World; it is no doubt of a long standing, as may be guess'd from what I mention'd before out of *Galen*, who tells us of a Lad that died by a Dose of *Theriaca*, given by an ignorant Physician. In all Ages there will be impertinent Busie-Bodies, who thro' Ignorance or Design will seem more than ordinary Meritorious, by, rather than fail, a most pernicious Diligence.

This is the true Theory of the *Antients*, upon which they built their Practice in *Fevers*, as we find recorded in their Works; and the Natural and Genuine Indication from it was to curb the inordinate Fermentations and præternatural Heat in the Bloud; this they did by cooling and moist-

moistning Medicines, cold Water in great quantities, Bleeding, Clysters, Cold Baths, cooling Ointments, Barley-Broth, or Ptisan, with a little Vinegar, and now and then Wine and Water; and if a plentiful Sweating or a *Crisis* came not in about seven days, the Case was thought very dangerous, and then Wine alone and Cockbroth were the chiefest Diet; sometimes the warmer Oils were in use too externally, to open the Pores, but any thing warm internally was never attempted, but with all the Caution imaginable, for fear lest their actual *Heat* should increase the inflammation of the Bloud. *Celsus*, our *Latin Hippocrates*, tells us, *Cap. 6. Lib. 3. In Febribus*

otio debet esse magis liberalis, ultra quam Sitis cogat, That in Fevers we must drink oftner than Thirst calls for it. Diluting well was thought by the *Antients* chiefly necessary in the Cure of Fevers; this they did in order to prepare the Humours to be carried off by the *Emunctories*, either by Sweat, Urine, or Stool, and bring the Fever to a speedy and a natural *Crisis*; by this Method the Humours are diluted and thinn'd, that were too thick before, which I call, and I think properly too, their true *Concoction*: This I take to be the Design of the *Antients* in their Cure of Fevers. Their Method is simple, natural, and obvious to common Understandings, and mean
Capa-

Capacities, in which they shew'd a profoundness of Judgment, an admirable and commendable Honesty, that has not been very common since: And I dare boldly affirm, these Notions will last and be of use as long as Human Nature exists; whereas the *Air Romances*, the Chimerical Whimfies, the groundless Notions of later Authors about *Fevers*, having no Foundation, but in their own giddy Brains, will perish and be forgot; these must change as Fashions do, on all Occasions but the others are of Eternal Verity, and must be so to the end of the World. I have been somewhat more particular in the Abstract of the *Antients* Opinion about *Fevers*, because I would
 hav

have the less to say in the Sequel of my Discourse, which I intend to prosecute with all the Brevity I can. Having premised thus much, I come now to my second Proposition, which is this: *That there are very few continual Fevers, except in Pestilential Constitutions, but may be cured by the first Intention, without the tedious expectation of (at best) a very doubtful Crisis.*

By continual Fevers I mean here such as continue so several days together, without any Intermission, and little or no Remission; these happen from evident Causes, as taking Cold, and Drinking, foulness of Stomach, Surfeit, or the like, and are what *Galen* calls the putrid Fever

Fever mention'd before. I shall not consider such in this Essay as come from *Contagious Airs*, or any that are truly *Malignant Constitutions*, which happen now and then unaccountable to our *Reasons*: These sort of *Fevers* then that come from evident *Causes* (and to such only I confine myself) I say, if well manag'd, may be cur'd by the first *Intention* (that is) may be carried off by a *Natural Crisis* in two or three days, either by *Sweat*, *Stool*, or *Urine*; and this not by any forcing, warm, fiery Medicines, and nauseous *Bolus's*, which make but a tedious and vexatious Progress at best to a very doubtful *Crisis*; I call it a doubtful *Crisis*, because it seldom happens but

ut by Chance more than Art.
ut the way I shall propose is,
y such Medicines as are pleasant,
lter the whole Mass of Bloud,
nd prepare the peccant Humour
or a Natural Discharge; this I call
uring of *Fevers cito, tuto, & ju-*
unde, as soon, as safe, and as
pleasantly as 'tis possible; which
take to be the Duty of every
ractising Physician in all Cases,
ccording to the best of his
Power.

Having thus fairly, I hope,
tated my Proposition, I come
now in the next place to consi-
der what a *Fever* is. And here
shall not undertake to give an
Account of the formal Reason
of it, *Essentia Rerum nos latent*,
he Essences of Things lye out of
the

the reach of our Understandings and are above our weak Reasonings and scanty Capacities. Nor shall I enter into any Dispute with the Learned *Pareira lib. de Feb. cap. 2.* Whether the *Heat* we observe in *Fevers* be of the same specifick Unity with our own *Native Heat, Calidum innatum*, so call'd, and is at this time only more intense, and in a higher degree, or else that 'tis some foreign or præternatural *Heat*, specifically distinct from what we call the *Natural*; the Learned *Author* I know determines it for the latter; I waive all such Niceties as these: *Nemo nimis argutam Philosophiam*. I love to go on Principles that are plain and evident, and not

the over-Critical Fineness of an argument, which commonly rises so much Dust and Clouds, that the Enquirer after Truth is rather confounded and misled, than inform'd by it which is the way to find it out.

And I must beg my Readers pardon too, that I do not adventure on the *Definition* of a *Fever* neither, because that would be *a priori* to determine its *Nature*, and would be disputable: but I shall give the best Account of it I can under these 3 *Heads*, which *a posteriori* will, I conceive, give us better hints, not only of its *Nature*, but also lead us into the best Method of *Cure*.

1. Then, all *Fevers* are attended with a præternatural Motion,

tion, *Effervescence*, and *Heat* in the Bloud. The Honourable Mr. *Boyl* has in his Book of the absolute *Rest* of *Bodies* given us several Experiments to prove that not only Liquids, but also Solids too, have an Intestinal Motion of their internal Corpuscles, or smaller Particles in their very Substance; he demonstrates this by an Experiment on *Lignum Vitæ*, which requires Twenty Years time to be season'd for some Purposes, that is, in such a time its inward Particles are brought to a proper Texture for the *Turner's* use, which wrought up before will crack and cleave asunder into many parts, expos'd but to the Heat of the *Sun*. This then is Nature

al to all Bodies, is the Life and
oul of every thing, and accord-
g to the Specifick Regulations
ign'd by the first Mover, de-
rmines all the vast Variety of
pecies there are in the World.
his makes that *Climax* or Scale
hich we see in the Works of
ature, which distinguishes the
s Perfect from the more No-
e Beings; and 'twould be end-
s to consider the Effects of this
testine Motion every where,
nd in all Bodies: I shall only
en consider it as it relates to us,
e most Honourable part of the
reation, and *Epitome* of all the
st. That there is such an In-
tine Motion, and by conse-
quence *Heat* in our Bodies, we
e demonstratively sensible of,
H and

and this is the Reason we cannot subsist long without constant Recruits to supply what the *Intestine Motions* and *Heats* in our Fluids and Solids too have thrown off by *Perspiration*, and the other necessary *Evacuations*; nay, *Growth*, *Decays*, and at last a final *Dissolution* or *Destruction* of the *Animal Life* within us wholly depend upon it. The *Scripture* tells us, in the *Bloud* is the *Life* of the *Animal*. I am very much inclined to believe, That the Source of our *Heat* lies in the *Bloud*; this is that *Vestal Fire* that is preserv'd to warm, by its kind influence, all the parts of our *Body*, whose total absence we are not able to subsist under one Moment. Now the Mass
of

of Bloud I take to be a Congeries of Particles of different Shapes and Sizes, which constantly, by their action and re-action one upon another, cause such a Friction and Collision of parts, as must of necessity produce what we call *Heat*, which kindles in us the first Instant of our *Lives*, and never ceases till after our *Death*. This Intestine Motion chiefly to be consider'd in the Mass of Bloud, I take to be the cause of that *Native Heat* within us, which, as long as it moves regularly placidly and calmly, the *Animal Oeconomy* is in good State, the Bloud is purg'd every day by its proper Emunctories, all the Juices sweeten'd, and Particles fit for *Nourishment*, the

chief Design of *Nature*, separated and convey'd to all the parts, that otherwise would want their necessary Recruits: On the contrary, all the *Species* of ill *Health* depend wholly on the irregular Intestine Motions in our Bloud; sometimes they are too high, sometimes too low, now and then hurried and unequal, by and by sedate and equal: And every Deviation from the Natural Standard, which we call the *Regular* Intestine Motion of the Bloud, so requisite to the *Life* of the *Man*, is a *Degree* of a *Disease*, or at least a *Tendency* to it. If this Intestine Motion in the Bloud be too high, the Bloud must be exalted above its Natural State, become subject to *Fe-*
ver.

vers and Inflammations, and the Particles of it must be in such a Hurry and Confusion, that Nature will not be able to make the Separations necessary, for in *tam rapido & veloci motu non datur Secretioni locus*, There can be no Secretion where the Particles are hurl'd about in so impetuous a manner. On the other Hand, if this Intestine Motion happens to be too low, Sanguification becomes too languid, the Chyle and Lymphatick Juices are not assimilated into Bloud, for want of a sufficient Motion and Heat to attenuate them; so that the Bloud soon becomes viscid, phlegmatick, and tough, circulates but slowly, and all the whole Animal Functions are obstruct-

H 3 ed,

ed, for want of a due Circulation of the Bloud thro' the *Capillaries* and *Glands*: And from this Defect come all the *Diseases* that owe their Original to a want of Motion and Heat, which occur every day in *Practice*.

If any Body should wonder I mention not the Word *Fermentation* in all this Argument, I answer, that Word is so often applied to that Conflict between *Acids* and *Alcalies*, that I designedly left it out on that Account, lest I should be thought to assign it as the Cause of *Fevers*. I know too well how precarious such Principles are, and how unfit to be made use of in this place, as the primary Cause of *Fevers*, and leave others to use such Popular

pular *Notions*, because they find they turn to Account among such as know no better: And till these bold *Affertors* have proved all Heat produc'd this way, and that it can't be by any other, I shall suspect that *Doctrine* as fallacious. For my own part, I am inclinable to believe, that the Original Cause of these Intestine Motions, not only in Fluids, but in Solids too, proceed from an *Aetherial Matter*, as the *Cartesians* call it, that Streams thro' the Pores of all Bodies, and where they meet with the least Obstruction, cause the less Motion and Heat. And I go on this *Principle*, That no Body has any Innate Power in it to move it self, as the *Epicureans* would have it: But rather as the

Cartesians hold, *Quicquid movetur movetur ab alio*, nothing moves, but by some Agent. I know nothing better solves such Motions as these we are speaking of, nor the *Fermentations* that arise from the mixtures of *Acids* and *Alcalies* together, *Magnetism*, *Sympathies*, *Antipathies*, and the like. Nay, it seems to me not altogether improbable, this subtile Matter passing thro' all Parts and Pores, may in ill Constitutions of Air convey such deleterious Steams and Vapours, such malignant *Miasmata* with it into our Bodies, as may cause what we call the *Plague*, or a *Pestilential Fever*; but these being but *Speculations* only, I leave every Man to believe, or not, as he shall find them.

them agreeable or disagreeable to his Natural Capacity or Understanding.

2. In the next place we must consider, That in *Fevers* the proper *Mixture* of the Bloud is very much disturb'd; this follows, I think, as a necessary Consequence of the former: For if the *Natural Component Particles* of the Bloud, consisting of various *Sizes, Shapes, and Figures*, are preserv'd, so long as these *Intestine Motions* continue placid and regular, the *mixture* of the Bloud must be undisturb'd; but a *præternatural* Intestine Motion or Effervescence in the Bloud must of necessity disorder and confound its Native *Mixture*. 1. By carrying off some of the thinner and more

volatile parts by Perspiration, thereby rendring the whole Compages thicker than it was before; this may be illustrated by the *Serum* of the Bloud turn'd to a Gelly by a moderate Heat, and the White of an Egg, by the addition of a little Brandy to it.

2. By their increase of Motion, Action and Re-action one upon the other, the *Particles* of the Bloud must by their *Attrition* and *Collision* be much alter'd in Shape, Size, and Figure, from what they were before. 3. And lastly, No Secretions being made as in *statu sano*, the Saline and *Empyreumatick* parts, which us'd to be thrown off as useless, remaining in the Bloud, cannot but alter its Texture, and confound its Mix-
ture.

ure: No Wonder then that Con-
sequences of an Extraordinary
Nature attend such Disorders,
and that the whole *Animal Oecono-*
my is out of *Eframe*.

3. If the præternatural Inte-
stine Motion in the Bloud, Effer-
escence and Heat, cause such
Alterations in its Mass, as
quite to alter the Texture of
its Component parts, the Work
of *Secretion* cannot be perform'd
to Advantage as before, and so
of course no due *Secretion* of *Ani-*
mal Spirits, any more than of
the other *Juices* in our Bodies,
for the same Reason. By *Ani-*
mal Spirits I mean no more than
some *Homogeneous Juices* separa-
ted from the Bloud in the *Corti-*
cal part of the *Brain*, which are
appro-

a proper *Vehicle* for that *Elastick Aura* or *Springy Air* we feel within us; this is that which keeps up the *Tone* of all the parts, seems to be the immediate *Organ* of the *Mind*, its true Minister or Messenger to convey all Orders to every part of us in an Instant, the Cause of *Motion*, *Sensation*, and *Nutrition*; when these *Animal Spirits* are duly separated from the *Bloud*, all these Offices are regularly perform'd, *Motion* and *Sensation* always do their Duty, and every part is supplied with sufficient Recruits for its Expende and Necessity. But if the disorderly Motion of the *Bloud* and the Confusion of its Component Particles should not only incapacitate it for the Separation

ration of sufficient quantities of these Homogeneous Juices, answerable to the Demands of Nature in the several parts of our Bodies, but also, by the Impetuosity of its Motion, force thro' the small Pores of the Fibres of the Cortical into the Medullary part of the Brain, such Juices as are of an Heterogeneous Nature, then all things run *susq; deque* the Empire of the Soul is lost, all Rational as well as Sensible Operations are in great Disorder and Confusion; and here 'tis I take it we have a Foundation laid for Apoplexies, Epilepsies, Lethargies, Convulsions, &c. where the Rational Soul is quite lost and buried: Palsies, Obstructions of the Nerves, and such like Distempers, quite drown.

drown the *Sensible*, by cutting off the Communication between the *Object* and the *Sensory*; and for want of Particles proper to be appon'd to the parts, and suitable to their Pores, *Nutrition* stands still, and is laid aside, to the no small Prejudice of the whole *Animal Oeconomy*. 'Tis I know very well a Dispute among the Learned in Physick, whether our Nourishment be from the *Bloud* or *Nerves*: For my part, I cannot see how so Heterogeneous a Composition as the *Bloud* is, with its *Intestine* and *Progressive* Motion consider'd, can be capable of that *Office*; but must concur with those, I think the best *Authors*, that attribute it wholly to the *Nervous Fluid*. And
this

this is what they mean when they say the parts are nourish'd, ἀτ-
 ρυγείδως, *per modum Vaporis*, by a
 kind of a Vapour. This is that
 Homogeneous Juice I plead for
 here in this place, which, whilst
 it continues so, moves placidly
 and slowly on thro' the hollow
Fibres of the *Nerves* to every part,
 nourishes it, keeps up its Tone,
 and is the Cause, as I said not
 long ago, of its *Motion* and *Sen-
 sation*. But if this Nervous Fluid
 is separated in too small a quan-
 tity, as I fear in *Fevers* it happens,
 and instead of simple, thin, soft,
 and smooth *Particles*, becomes
 deprav'd with such as are viscid or
 saline, this probably is the Cause
 of its irregular Motion in the
Nerves; and from hence I am apt

to think come all the *Anxieties*, *Inquietude*, *want of Sleep*, *Spasms*, *Convulsions*, *disorderly Pulses*, &c. we so frequently meet with in *Fevers*. *Vid. Ent. Cole, Baglivi, &c.* who have largely discuss'd this *Doctrine*, and the *Acurate Anatomist Malpghius* in his *Posthumous Treatise*, *Edit. Amstel. p. 39.* has demonstrated its *Existence*, and shewn the *Method of finding it* in one of the larger *Nervous Tubes*.

From these plain, obvious, and I fancy self-evident Principles, I form this *Indication*, That the *Cure of Fevers* consists in the curbing or suppressing the too great *Heat* and *Effervescence* in the *Bloud*, in restoring it to its proper mixture, that a due *Secretion of Animal Spirits* may be made

made in the *Brain*, and a regular Conveyance of them to all the parts of the Body. I have been pretty large in my Observations on the Cure of *Fevers* in the first *Essay*, and have made some *Reflections* on the Method of Cure much in fashion among some sort of Men; upon this Account I have the less to add in this. I have, 'tis true, Censur'd the warm Method as injurious, and very doubtful at best, because of the Disorder and Confusion it puts the Bloud into, which I have seen and observ'd many times; but the more temperate Method is most Rational, in order to check these Disorders and Irregularities in the Bloud, is levell'd point blank at the Disease,
and

and for the most part attended with better Success.

This *Temperate Method* is by Medicines that have little or no Heat in them, Qualities very different from those in the Bloud at that time; upon these they operate, by altering the Nature of some Particles in the Bloud, and carrying off others thro' the Emunctories by a natural and not forc'd Discharge, they soon change the whole *Mass* of Bloud, restore it to its proper *mixture*, and settle and compose the *Animal Oeconomy* so much out of order. These things being premis'd, I am not afraid to own it as my Opinion, That after the proper Discharges made by *Bleeding, Vomiting, Purging, or Clysters,*

ers, *pro re nata*, as there may be occasion, and very often without any more than breathing a *Vein*, *Opiats*, *Diluters*, and *Diureticks*, are the *Specificks* in the cure of *Fevers*; *Opiats*, as they compose and quiet the Fury of the *Bloud* and *Animal Spirits*; *Diluters*, as they dissolve the *Coagulations* of the *Bloud*, subject to be too compact and viscid at this time; and lastly, *Diureticks*, as they attenuate the *Humours*, and prepare them to be carried off by *Urine*.

By *Opiates* I mean *Diacodium*, all cooling *Waters*, *Emulsions*, *Herbets*, &c. By *Diluters* plentiful *Draughts* of *Barley-Water*, *Sack-Whey*, *Small-Beer*, *Water-gruel*, *Broth*, &c. And by *Diureticks*,

ticks Salts of the Acid or Neutral Nature, Cream of Tartar. Tart. Vitriol. Crystal. Nitr. Flor. Sal. Armon. Arcan. dupl. mixtur. Simpl. Sal. Succin. Camph. Sacchar. Sat. Aq. Theriac. and such like Medicines: These are to be dissolv'd in the Liquors aforesaid, and to be taken not in small Nipperkins, but in large Draughts, and as fast almost as the Patient can swallow them, with a little Aq. Theriac. or mixtur. simp. now and then, or a palatable Cordial to help the Stomach, if there be occasion. By this Method, which I have pursu'd now for some Years, no Person has miscarried under my Hand these Five Years where I have had the Management my self. By treating People

le thus I have a Natural Discharge in three or four days time, and often less, by temperate sweats, or a large Evacuation by Urine, or else some Stools cast off what offended. I very rarely use *Venice-Treacle*, or *Diascordium*, without an Acid to bridle them. Nay, our Cordial Waters I am afraid to give, without spirit of *Vitriol*, or *Sulphur*, because now, as I said before, *Brandy* is dear, they are drawn from *English Spirits*, and have an *Emphyreuma* in them that's very ungrateful to the Stomach. The Patient must continue Sweating till the Fever goes off, which is in some longer than in others, as the Case requires. But this is more easily born than the warmer

warmer Method, because nothing is prescrib'd that heats, or is nauseous to the Palate or Stomach, and only throws them into a moderate gentle Sweat, that if by Liquor enough supported, is little or no Trouble to the Patient, and vanishes in a very short time. I will not affirm this Method will suit all Constitutions, and cure every Body, *Non est in Medico semper relevetur ut Æger. Ovid. de Ponto.* Nothing can be adapted to all Constitutions; but this I really believe, there are few but will bear it, and find it much easier and safer than the warm Regimen. Whoever despises this Method for its Simplicity, and want of Pomp and Form, I only tell these

These Gentlemen, for my part
am more in love with one Sim-
ple Specifick where I find it than
with Orvietans, or any pompous
Compound Medicines whatso-
ever. The Virtues, *Dioscorides*
tells us in his Preface to *Androma-
chus*, of Simple Medicines may be
understood, whereas those of
Compositions are hardly to be ex-
press'd. And *Pliny* in *Lib. 22.*
cap. 23. speaking of Simple and
Compound Medicines has these
Words, *Nos simplicia tractamus,*
quoniam in his Naturam esse appa-
ret, in illis conjecturam sæpius fal-
acem, nulli satis Custodita in mix-
tis concordia Naturæ ac repug-
nantia. And in the next Chap-
ter the same Author says, *Non*
cit Ceratum, Malagmata, Em-
plastra,

plastra, Collyria, Antidota, Parens illa ac Divina Rerum Artifex; Officinarum hæc imo verius Avaritiæ Commenta sunt, (i. e.) Simple Medicines are best, because most Natural; whereas Compositions are meerly Conjectural, and contriv'd only to get Money.

I shall name but one Authority more, and that is *Alfaharavius*, the *Arabian*, in *Tbeor. Tract. 15. p. m. 21. Melius est minorare Compositionem Medicinarum Simplicium, quam ipsam multiplicare, & verificetur tibi, quæ illarum efficacior est in Juvamento, quoniam Medicinæ simplices plures & infinitæ sunt, unde sollicitudo in earum Compositione, non nisi Labor & Vanitas est.* I have observ'd the Effects of the more compounded and warmer Medi-

Medicines very often, but rarely and by pure accident ever saw *Nature* relieved by any Sweats or Stools that were provok'd by them, because they were all forced, and not from any *Crisis* perform'd by Strength of *Nature*: But I have many times seen *Fevers* (as to all appearance what some would call *Malignant*, and treat with their *Alexipharmacks*, *Bezoardicks*, and *Cordials*) determine in two or three days time or less, without the help of any of these warm Medicines, by a natural and moderate Sweat continued 12, 14, and sometimes 16 Hours together in the beginning, by the more simple and temperate Method mention'd. I know it very well now and then

then very *Anomalous Fevers* will occur so circumstantiated as to require some warmer Medicines, according to the Constitution of the Patient, and way of living, which may be allow'd them with Discretion; but the roasting Method is intolerable, and peculiar to us in *England*, not known abroad, and fit only to be exploded by all Honest Men. I am not ignorant 'tis more Honourable and Profitable to keep a Patient a Fortnight, or longer, than cure him in two or three days; there appears to the standers-by more Pomp, Pains and Skill in the Recovery of any one, whose Fever is attended with any more than ordinary bad Symptoms for many days together, than

than when a Fever is cured in few days by an easie Method; the World does not know that very often those ill Symptoms are wholly owing to the Method prescrib'd, and that the true Art of Healing in Fevers is only visible for the most part in the prevention of such Symptoms.

One Word or two of the *Bellinian* Theory of *Fevers*, and their Cure, and I shall put an end to this Argument; and I shall here in this place only hint at it, as I find it in the *Author* himself, with some general *Reflections*, and leave every Body to judge as they fancy. *Bellini* in his Book *de Missione Sanguinis* takes it for granted, That all *Fevers* are occasion'd by Obstructions in the

Capillary Bloud-Vessels and Glands, these increasing the quantity of Bloud in the larger Vessels, cause its Motion to be quicker and stronger, which together with the vitiated Fluid stagnating in the *Capillaries*, concur to cause a *Fever*. *Dictum quasi ex Tripode!* Who would have expected so precarious a Doctrine from a Man of Demonstration? And sure from a bare *may be* in the Premises, to a *must be* in the Conclusion, is bad *Logick*, and worse *Mathematicks*. When Men come to strain their Fancies for hidden Causes, and desert those that are plain and evident, no Wonder they soon run themselves aground, lose their Argument, and only puzzle many times a plain

a plain Cause. This *Theory* of *Fevers* is not more precarious than the *Practice* would be pernicious, were it but Universally entertain'd; for to favour this *Hypothesis* he has establish'd a *Practice* contrary to the common Experience and Methods in all Ages of *Physick*; this is very manifest in his aforementioned Book, Proposition the Tenth, p. 239. where he has this Expression, *Assero igitur tutissimum tempus Sanguinem mittendi in Febribus esse declinationem earundem.* (i. e.) I affirm you ought not to Bleed in Fevers till they begin to decline. A Doctrine fit enough for an *Enthusiast* in *Exeter Exchange* to enlarge upon, but methinks very unbecoming Men of Mathematical

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mathematical Mechanicks and Demonstrative Learning : He that takes a liberty to suppose any thing, may from thence most certainly prove any thing he has a mind to, and serves his *Turn*. I am sorry to see so useful a Science as the *Mathematicks* prostituted thus, and applied to Matters that are not capable by any of its *Rules* of being made evident and demonstrable. *Corruptio Optimi est Pessima*. Thus *Mathematicks*, the most useful Science, becomes the most dangerous, when the Professors of it act beyond their *Sphere*, give a loose to the Extravagancies of *Fancy*, and spend that Time in impertinent *Speculations* which ought to be employed in the search after Truth, from
sufficient

sufficient *Data* and decisive Experiment. It must be granted, what *Borelli* has perform'd in his *Book de motu Animalium*, and *Steno* in his *Myologiæ Specimen*, are of great use. The *Articulations*, *Structures*, *Insertions*, and *Powers* of the *Muscles* must be Mathematically consider'd, their *Final Causes* are no other way to be accounted for. So the *Anatomy* of the *Eye*, and its various *Operations*, cannot be well understood without the *Doctrine* of *Perspectives*, as my very Learned Friend *Dr. Arbuthnet*, Physician to his *Royal Highness*, tells us in his *Masculine Essay* of the usefulness of *Mathematical Learning*. But the *Motions* of the *Fluids* in our *Bodies* are of quite another *Nature*,

I 4

ture, and depend on Principles and Causes that are very uncertain and unintelligible, I fear, of themselves: For till we can arrive to the certain knowledge what that is that causes that *Plastick Fancy* in Women with Child, which makes those Impressions and Marks on the *Fœtus* in its Mothers *Womb*? How *Mind* operates on *Matter* in the great variety of Passions we are subject to? What the Capacities are of all the containing Vessels, the Quantities of the *Fluids* contained in them, their Motion, and component parts? What makes the Specifick Differences in the particular Constitutions of Men? And how the Glands of our Bodies, contriv'd by *Nature* for the
great

great variety of Animal Secretions, are form'd and shap'd, so as to make that distinction in the Juices that pass through them? Till, I say, we know all these hitherto Unintelligibles, and several other things I could name, we must not pretend to any Certainty in the *Doctrine* of the *Fluids* within us, but should be satisfied with what seems to us most evident, and founded on Experiment. Till these *Incognita Naturæ*, *Mysteries in Nature's Court* are discover'd, I shall be contented *Crasso modo Philosophari*: For having accusom'd my self to the plain way of Reasoning of my Old Master *Hippocrates*, and his best of Commentators *Bagli-vi*, and the demonstrative Ex-

periments of our *English Aristotle*, the Honourable Mr. Boyle, I must confess I have little *Taste* or *Relish* for what is not easily understood, and appears self-evident at first sight, either in the *Theory* or *Practice* of *Physick*.

I have hitherto confin'd myself to the common *Continual Fevers*, because I would not enter upon the Consideration of such as are *Malignant* and *Pestilential*, but *en passant*: These are allow'd by every one to owe their Original to secret *Intemperatures* or ill *Qualities* in the *Air*, which communicating with our *Animal Spirits* occasion all the dismal *Effects* which attend a *Pestilential Contagion*. This is that π *Qeioy* of *Hippocrates*, which is suppos'd by him

him to have somewhat Divine in it, as coming from the *Airy Regions*, where Jove himself Govern'd in a peculiar manner. And all *Authors*, *Christian* and *Prophane*, agree in this, That 'tis *Digitus Dei*, a Judgment from God Almighty. I shall only make this one Remark, That *malignant Fevers* differ very much one from the other, for according as the secret Cause of the Constitution of one Year is different from what it might be in a former, so the *Symptoms* are not the same, but very various, and so must the Practice be, *vide Ramazini Constitutiones*, the best Author I know on this Subject: This Learned *Physician*, an *Italian*, tells us, he has observ'd in his Country

try malignant Constitutions some Years from a *predominant Alkali*, and sometimes from a *predominant Acid*.

I have omitted any mention also of *Agues*, or *Intermitting Fevers*, because should I undertake to speak of all their particular *Species*, they would swell my *Essay* too big, and are beside my *Original Design*. Every Body knows how troublesome these were before their *Specifick* the *Cortex*, or *Jesuit Bark* was in use; but this seldom fails now of curing all the *Species* of them, provided rightly manag'd, but leaves often very ill Impressions on the Constitution where it is irregularly given: These also are to be consider'd sometimes as Con-
stitu-

stitutional and Malignant too, and not subject to the common Method of the *Jesuits Powder*. I shall only add one *History* of a true *Calenture* I once met with, which having somewhat in it relating to the Method I propose, may not be impertinent in this place.

In the Month of *August* 93. I was call'd upon to see a Sailor in the *Albemarle* Man of War, about Four a Clock in the Morning in a violent *Calenture*; he was between Thirty and Forty Years of Age, of a brown Complexion, middle Stature, and had not much Flesh about his Bones; when I came to him first I found him in the Hands of 3 or 4 of his *Comrades*, who were hardly

hardly able to manage him, because of his constant Strugglings and Endeavours to get from them; he cried out often that he would go into the *Green Fields*, and heartily Curs'd those that held him: I examin'd his Pulse, found no distinct *Vibration* at all, but only I could feel a disorderly Motion of the Blood in the *Artery*, and that was all, and a burning fiery heat all over him: The *Surgeon* of the *Ship* had try'd to Bleed him before I came, but tho' the *Vein* of the *Arm* was fairly open'd, yet could he not get one Ounce of Blood from him; upon this I order'd him to open the *Frontal Vein*, which succeeded much alike, for after we had got an Ounce, or
some.

some small matter more, it stopt there too; this put me upon trying farther, what the opening of the *Jugular Vein* would do, and here we had near two Ounces of florid thick Bloud, and then it stopt quite; upon this I desir'd the *Surgeon* to try what might be done at the old Orifice of his *Arm*, and from thence we had a small quantity more; now having three Orifices open, we drew it sometimes from one, and sometimes the other, where it ran best: After several *Essays* of this kind, I observ'd he always bled freer, as the Vessels emptied, and at last the Bloud came fast enough; so that in about half an Hours time at least, as near as I can guess, we took

took from him about Fifty Ounces of Bloud. After some time had been spent in Bleeding, I perceiv'd his wild Looks abated, his Strugglings to get loose were weaker, his raving and crying after the *Green Fields* not so loud, nor so often; and then feeling his Pulse again, I found it begin to recover its *Vibration*; and that his Heat was more moderate: Observing this Success in Bleeding, I resolv'd to go on, and govern my self as the *Symptoms* should direct me, being of Opinion I ought to Bleed him till he was Sober. At last, when these *Disorders* were pretty well settled, after taking so much Bloud, as I mention'd before, I had a *regular Pulse*, a temperate
Heat,

Heat, and the *Fury* of his *Spirits* moderated to that degree, that he that before was as furious as a *Lion*, was easily now to be manag'd by one Man. I order'd him then to his *Hammock* as soon as the *Orifices* were secur'd, and directed the *Surgeon* to give him an Ounce of *Diacodium*, or *Syrup* of *Poppies*, in a large Draught of *Barley-Water*, as he went into it; with this he slept till about *Noon*, and wak'd with no other *Complaints*, but of *Weakness* from the loss of *Bloud*, and *Soreness* all over, occasion'd by his *Strugglings* to get loose, and *Convulsions*.

This was the only *Calenture* I saw all the time I serv'd in the *Fleet*, and this happen'd in the
Bay

Bay of Biscay, in the *Lat.* 46 and 47. or thereabouts; I hear they are more frequent in warmer *Climates*. The Reason why I saw no more when in the *Mediterranean*, where we had very warm Weather, I conceive to be this: When they are seiz'd with this violent *Heat* and Disorder in the Night, they steal overboard into the Sea thro' the Port-holes, or which way they can best, imagining only they are going into the *Green Fields*. But I have heard of many a Seaman lost in the Night, which have been suppos'd to have gone off this way undiscover'd. And this very Person, as his *Comrade* told me, who seiz'd him first, was actually going to leap overboard,

board, when he caught hold of him, call'd for help, and so secur'd him.

This Distemper I take to be true *Phrenitis*, occasion'd by a more than ordinary *Effervescence* and *Heat* in the *Bloud*, which is distracting and confounding, if not inflaming the *Animal Spirits*, the cause of all those irregular Motions and *Convulsions* in this case. Hence 'tis the *Animal Idæa's* are perverted, the *Imagination* deprav'd, and all the *Rational* functions disorder'd. From these *orgasms* in the *Animal Spirits* we may give some account of the want of *Pulse* too, the constant and impetuous Motions of which afford no room for any distinct vibrations, or *Phlebotomy*, the Orifice

Orifice of the Vessels contracting presently, and probably the thickness of the Bloud might concur a little on that occasion. His crying out for the *Green Fields*, the true *Criterion* of this Disease, I take to be from the violent Heat he was in, which made him wish for *Green Fields* to cool him at that time, the Ship being too warm for him under those Circumstances for want of more *Air*. And lastly, this happens for the most part in the Night, because our Ships are kept closer, fewer Ports open by Night than there are by Day.

Of the SMALL-POX and MEASLES.

IT is a very Satisfactory *Argument* to me, that the *Small-Pox* and *Measles* too, are Diseases that occur'd not in the first *Ages* of *Physick*, because the Divine *Hippocrates*, who so accurately all along in his Works describes the *Maladies* he met with, hath laid nothing of them. And certain it is, the *Greek* Physicians after him, and the *Old Latin* too, make not the least mention of either. Besides, 'tis very hard to believe the *Ancient Historians* should

should take no notice of so dismal a Distemper, nor the remarkable Effects that attend it. And that the Old Poets should not think it a Subject fit for either their Wit or *Ill-Nature*, must be very strange to any Man that will but consider how ready they were upon all occasions to reflect on the Blemishes and Misfortune of Mankind. So that for my part, I must conclude from their Silence, no such Disease ever happened in their time. Nor are the *ἔξανθήματα, ἐκθύματα, ἱανθήματα* or any words signifying Eruptions, Pustules, or Breakings out in the Skin, or Habit of the Body, frequently to be met with in *Hippocrates* and *Galen*, any ground for our belief, that they intended

or design'd these Distempers by them. The first Account we find in any Authors, of *Small-Pox* or *Measles*, is from the *Arabian Physicians*, about the middle of the *Twelfth Century*, when *Avicen* the Great *Arabian* liv'd, and makes the first mention of them. How long it had been known before that time, no *Records* that we have in *Physick* can inform us: But probable 'tis, from *Arabia* its *Venom* spread over *Europe* by the frequent *Incurfions* the *Arabians* made into *Africa*, and afterwards into *Spain*, as our *Histories* do inform us. Thus the *Seed* once sown, has propagated its *Poyson* in all *Ages* since, and when it will be worn out, *God* knows. I call it a *Seed*, because I find

Diseases

Diseases keep regular Types, and have peculiar Attributes, that distinguish them one from the other, as the Seeds of *Plants* do their particular *Species*. What this Poyson is, or how it operates on our Constitutions, is too large a Field of Argument at this time, and therefore I shall pass it by, and only show how many *Species* we meet with of this Disease, and how they differ from each other.

There are then Three *Species* or Sorts of *Small-Pox*.

1. What we call the *Distinct* or kind Sort, when the Pustules are large, few, and separated at a distance from one another appear the Fourth Day, and are at their Height the Eighth. These

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re seldom very troublesome, only cause some Uneasiness, Pains of the Head and Back, Fever, Sicknes at Stomach, and sometimes a little vomiting, at their coming out, before they appear, and at the time of their Suppuration on the Eighth Day, when the second *Fever* comes on, and when the Face and Hands swell, and all goes off in a few days. Sometimes in a Malignant Constitution even this sort is not free from danger, but very rarely else; and many are not at all sick with them from the beginning to the end, unless they are very ill treated.

2. The *Middle* sort. These are not altogether distinct as the former, but here and there, it may

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be, in two or three places, and sometimes more, touch one another in the *Face*, and by that are easily known from the former; they commonly appear the third day, and are at their height on *Crisis* on the eleventh for the most part. This sort, generally speaking, is attended with a brisk Fever, and all the Symptoms of the kind sort, but in a greater degree, the Pustules are small, and they are seldom without a Salivation, which towards the end, when the *Spittle* grows thick is very troublesome, and many are quite choak'd with the thick *Phlegm* that lies in their Throats. In this the *Frenzy* is very high and the Patient altogether ungovernable; and according as these

Symptoms

Symptoms are in this Case, so is the Success or Event of the Distemper.

3. The *Flux* or *Confluent* kind. These run over all the Face, in one *Cluster*, and nothing can be put between them; are often hard and horny, and always very dangerous: The Symptoms are all the same with the former, but severer; their Throat is often so inflam'd they can hardly speak, or swallow, and when they do, their Drink frequently returns thro' the Nostrils: They Salivate very much, and recover with a great deal of difficulty. The Critical Day in this sort of *Small-Pox* is the 11th, sometimes the 14th, 17th, 21st. For being of a cruder nature than the rest,

it requires longer time for ripening. About this time the Salivation begins to cease, and if the swelling of the Face and Hands come on regularly, the Patient has a better chance for his Life, the want of which is of the last Consequence. *Note, That Children spit not in the Confluent kind, because Nature cleanses them by a Looseness, and frequent Stools every day. Thus you see the Types of the Small-Pox vary according as the Seed or Original Ferment is, that first attacks the Constitution. Naturæ sequitur Semina quisq; suæ. Whether the Humours in our Bodies have any share in the Determination of these Species, I shall not take upon me to determine; nor*
what

what the *Nature* of this *Ferment* is, or what sort of Salt it consists of; but think, from their different Shapes and Sizes, the *Species* they constitute, differ one from the other.

'Tis observable by Dissections of Persons that have Died of this Distemper, that not only the Skin in the Habit of the Body will be full of Pustules, but that the Muscles, Bowels, and all the inner parts have them also in proportion. *Vid. Bonet. Sepulchret. p. 1509. 1510.* Spots intermix'd with the Eruptions are always dangerous in all the three sorts, especially the more they incline to a Purple. Bloody Urine, or any Hæmorrhage whatsoever, argues that the Compages of the

Bloud is broken by the Malignity of the Ferment, and is a very bad Circumstance. Most People have them once, seldom twice. This I saw once at *Bathe* in a Child, who having but a very few the first time, was attack'd again the second, before the others were quite dried off. I have often observ'd, that if in the breeding the Small-Pox, any uncommon Pains disguise the Distemper, that the Patient is severely seiz'd, and seldom escapes, and if he does 'tis with all the difficulty in the World, and that it always falls severer upon Persons in Years than such as are Young. 'Tis I know the common Opinion, that any Old Woman can cure the Small-Pox:
For

For my part, I do profess I do not know any Distemper that requires more Care, and a Physician's Diligence and Skill. Whether to Bleed in the beginning, Vomit, or by a gentle Diaphoretick, dispose the Morbifick Matter from the Center to the Circumference, are Matters of great Concern to the Patient in this Disease: Either of these in excess prove Fatal too often, the two first by weakening Nature, that she is not afterwards capable of going thro' with the Distemper, and the last by its heat assimilating too much of the Morbifick Matter. If Sickness and Uneasiness, tumbling and tossing too and fro happen in this Case, a gentle Diaphoretick becomes necessary,

cessary, by throwing off on the Habit of the Body that Matter that was in the Nervous Tubes, mix'd with the *Nutritious Juices* there, which caused that Irritation and Uneasiness; but if these are repeated too often, the *Febrile Ferment* is more exalted, makes a farther Impression on the Juices of our Body, the more Small-Pox are made, the greater Suppuration, and the more danger in the second *Fever*; the whole Course of this Distemper is subject to so many Accidents, the Consequence of which may very often be prevented by the Physicians Care, which otherwise may prove Fatal if neglected. Dr. Sydenham has wrote so Learnedly of the Cure of this Disease, that
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I need only in this place to refer my Reader to him for farther Satisfaction in this Distemper, and the Measles also; only I must not omit, that Bleeding in the second *Fever* is very often necessary, when it runs high, and a timely Blister to prevent, as much as we can, the Frenzy about that time to be expected; and Vomiting too, when the thick *Phlegm* threatens to strangle the Patient; and that warm *Cardiacks* will be towards the end of this Distemper necessary, to support *Nature*, and bring on a successful *Crisis*.

*A Dissertation on the Hot
Waters of Bathe. In
a Letter to a Doctor of
Physick in the Country.*

S I R,

I Take it for granted, that the hot Waters of Bathe break out of the Bowels of the Earth, after the same manner with other Springs; but shall not pretend to determine from whence they have their Original, (i. e.) whether they proceed, 1. From Subterraneous Caverns or Lakes. 2. From Air or Steams from Subterranean

aneal Fires pent up in the *Earth*, and afterwards condens'd into *Water*. 3. From the *Sea*, by some hidden passes thro' the *Earth*. 4. And lastly, from *Rains* or *Snows* melting from the tops of *Mountains*, soaking thro' the *Pores* of the *Earth*, or falling into it thro' the *Clefts* of *Rocks*; these are all disputable among the *Learned*, some con- tending for one, some for ano- ther. But such *Speculations* as these I pass over in silence, be- cause they would take up too much of my *Time*, who design only to give you some *Practical Hints* about these *Waters*; only I think 'tis probable tho' they may spring from the same origi- nal *Cause* that other *Waters* do,

yet they must owe their Virtues to some Mineral, and imperfect Metalline Substances they meet with in their way, with which they are impregnated, not far from the place where they break forth: And all our Baths are I take it all from the same Original, only differ one from another according to the distance they are from it, or the indirect Passages thro' which they are convey'd. Thus Medicated Waters are form'd, according to *Aristotle Lib. de Sens. & Sensil. Tales sunt Aquæ qualis est Natura eorum per quæ transeunt.* And *Galen* tells us, *Lib. de Simpl. Medicin. Quæ exacte & sincere Aqua est si per Bituminosa, Sulphurosa, &c. loca decurrens substantiæ aliquid absterferit,*

sterferit, secumq; traxerit, &c. I shall not in the next place undertake to give you any *Analysis* of these Waters, their component Particles are so intimately united and blended together by *Nature*, that no *Art* will ever be able, I am of Opinion, to make a compleat Separation of their Ingredients: That they are compounded of a *Neutral Salt*, or as *Blondell* calls it, a *Chaos* of Salts, (*i. e.*) of several sorts, *Sulphur*, *Bitumen*, *Earth*, and *Water*, is very probable, but what quantities of these are employ'd in this Noble Composition, is, and I believe ever will be, an insuperable Difficulty: That there is a *Gas* in them, or an exalted *Vitriolick Steel*, we may easily prove
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by our *Senses*, because while warm we may both smell and taste it; but this is lost when cold, tho' never so well stopt, or Hermetically seal'd up in Glass, being of so subtil and volatile a nature, that nothing can confine it: And whoever shall undertake at any time to collect it, will perhaps succeed little better than *Cornelius Drebbel* did, who endeavour'd to distil out of several Bodies, and bottle up the *Anima Mundi*, or Soul of the World. And I am very much mistaken if it be not a very hard Task to prove also that the very quantities of *Salts, Sulphur, Earth,* and *Water*, *Chymists* find in them, are the same which *Nature* employ'd in their first mixture.

Every

Every Body knows, that has any Notion of *Chymistry*, that the Operations of *Fire* upon any Bodies, make great Changes in their Texture; inso-much that sometimes they alter even their very *Hypostatical Principles* (as the *Chymists* are pleas'd to call them) and produce somewhat new, and of a different Nature. These Considerations discourage me from being too nice in my Enquiries what the Ingredients of these Waters are ; and the Experiments made by others shall satisfy me. I wave all doubtful Speculations, as of no Use at all in *Physick* ; all the Curiosity I have, being only to know practically what Effects they have on the Constitutions of Mankind.

And

And I am persuaded the Practical Experiences and Observations that may be made upon their Use, are the only true Way to recommend them to the World. 'Tis no less difficulty to determine from whence their *Heat* comes, whether from *Subterranean Fires*, or *Fermentation*. I must confess I am inclin'd more to the latter, because I can more easily imagine how from a mixture of differing Salts, and other Ingredients dissolv'd in Water, constantly supply'd by Nature, may follow such a *Fermentation* and *Heat*; we see this by Experience every day. The *Sieur d' Ayglun*, or *Monsieur de Rochas*, in his *Treatise of Mineral Waters*, printed at *Paris*, 1635. has given us the best

best Account I meet with any where of this Operation. He tells us, Having a Curiosity to find out the Cause of a Hot Spring he met with in the Mountains of Savoy, and the Nature of the Contents, he got Workmen to dig into it, and trace its Original, which in Fifteen Days time they found; and here he says the Water was very hot, bubbled and boiled mightily, and cast off a great deal of Scum from it. Digging on Three Days longer, the Water was quite Cold, though one continued stream with the former, and very different from it also in Taste. Upon which he comes to this Judgment of the Matter, That the same Water was Hot and Cold,

Cold, according to the Places they pass'd through; that this Earth where the Heat was, cou'd be nothing but a Mine of Sulphur, and that the Water had in it an Hermetick Salt, whose Nature he would not determine; and thinks it's plain, the Spirit contain'd in these Waters, piercing into the Substance of the Sulphur, caus'd the Ebullition and Heat, just as Water cast on Lime. Pursuing his Enquiries farther, in Twelve Days time more he met with pure sweet Fountain Water. *p. m. 18. &c.* This is the same Author the Learned Dr. *Pierce* mentions in his *Preface* to his *Bathe Memoirs*. 'Tis an Author has some very remarkable in it, besides this odd Story,

ory, and therefore I recommend him to your Consideration either originally in *French*, or else the Translation into *Latin* at the very end of the Sixth Volume of the *Theatrum Chemicum*. But that *Subterranean Fires* can burn so reddily under Ground, as not to be affected by the *Heats* in Summer, nor the *Colds* in Winter; that Wet Weather nor Dry, now severe soever or lasting, could make no manner of Impression on its Heat, is hard to conceive: For they are always the same, and never alter by any Weather or Seasons of the Year, the Spaws frequently do. Therefore any body studies this Point, the more Doubts and Difficulties will arise; and he'll find very little

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tle Satisfaction in his Enquiries
after these Matters. Certain
is, their Sources lye very deep
and the Town stands on a Bog
on an Artificial Foundation of
Earth, which is girded round
with Walls that serve to keep
in. What Artifice the Ancients
used to secure the Springs; what
part of the Town they are in
or how convey'd, is to the Inhabitants
altogether unknown. So that
'tis a *Traditional Religion* among
them, not to dig any where
too deep, for fear of disturbing
or interrupting the Springs
which would be attended with
great many very ill Consequences.
But how ignorant soever I acknowledge
my self to be, after
all my Enquiries, the Experi-
ment

ents I have made, the Books I
have read concerning *Hot Springs*,
and particularly those of the *Bath*,
what the *Ingredients* are, or what
may be the Cause of their *Heat*;
yet I make no scruple at all to
tell you, that I can never enough
admire the *Composition*; and cannot
but think it one of the greatest
Blessings God has bestow'd
upon the Inhabitants of our Island,
that we have such *Healing Springs*
these are to resort to, which
is so great a Remedy in most
of the *Chronick* Cases that afflict
Mankind.

Having premised thus much,
give me leave in the next place
to acquaint you with the Methods
used at *Bathe*, 1. In Drinking the
Waters, and 2. In Bathing. 3.
Pumping;

Pumping; and that with all brevity. I can.

First in *Drinking*. These Waters then are drunk hot for most part from the *Pump* every Morning fasting, or else in the *Lodgings*, as hot as they can procure them; they are drunk hot for the sake of the *New Spirit* that circulates in the *Waters* which being somewhat akin to the *Universal Menstruum* or *Alkali* best in our *Stomachs*, does wonderfully recruit it when lost or broken; and really 'tis strange to see its Operations on weak *Stomachs* and decay'd *Appetites* which are soon restor'd by drinking these Waters warm. We have known several brought from the *Bathe* reduc'd to the last Ex-

unities almost, whose Stomachs were so weak and nice, that they could hardly keep any thing in them, but vomited every thing they took of either Meat or Drink, and yet those very Persons swallow'd these Waters, tho' warm, with a great deal of Pleasure, they sat easie on their Stomachs, nourish'd and refresh'd them so, as in a few days time to get them an Appetite to Flesh and Fish, and soon recover'd. The Custom of drinking these Waters at the Pump and warm, has not prevail'd long, at least has not been so Universal, for tho' some drank them every Year, yet above 20 Years ago I remember very few came to *Bathe* for any thing but the Bathing part. I have

have often wonder'd how they came to be neglected so long, the Waters of *Bourbon* in *France* and *Aken* in *Germany* having been drunk Time out of Mind. And hot Waters internally are commended by *Hippocrates* in his Book *de Aere Aqua, &c.* And also by *Aristotle*, *Plutarch*, *Galen*, and all the Old *Greek*, *Arabian*, and *Latin* Physicians: And *Bacchius*, *Fallopious*, and *Mercurialis*, and several more of the Moderns, recommend the drinking the Waters of Hot Baths in a great many Cases. In discoursing then of these so Excellent Waters, for Method sake I shall confine myself to these Heads. 1. The manner of its Operation. 2. The time when they are to be taken.

aken. 3. The Quantity, or how much. 4. And lastly, The Accidents that happen to such as drink them.

1. The manner of their Operation; and here I shall not attribute the Virtues of these Waters wholly to the *Spirit* that is in them. I believe their *Heat*, which is little more than that of our Bloud, and the other Ingredients, tho' small, that are in it, concur to make it easie to the Stomach, as also does the watry Vehicle, by dissolving the vitiated Juices that are lodg'd in the *plushy* Coat of the Stomach, and conveying them out of the Stomach into the *Intestines*. And this I take is the Reason why Bath-Waters Purge most People by Stool

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in the beginning: Nay more, they afford a simple *Homogenous* Nourishment to the weak Patient at that time, the Fibres of whose Stomach are not able to bear any more compounded Food. This *Watry Vehicle*, as I call it, passes thro' the *Lacteals* into the Bloud, and by its Diluting Quality renders all the *Juices* of our Bodies more fluid, sweetens them, promotes their Circulation, and so becomes of Universal Benefit to the whole *Animal Oeconomy*. By the help of these Waters all Obstructions in the *Viscera* are removed, and the *Kidneys*, *Bladder*, and *Womb* cleans'd, and all viscus phlegmatick Particles or Gravel diluted first, and after carried off by

Urine

Urine or *Stool*. This Diluting Quality it has, not only dissolves and attenuates the more tenacious viscid Particles in our Bloud, but digests and exalts them too, by promoting their intestine and progressive Motion, and so rendering them more capable of recruiting the *Animal Spirits*, whose Elasticity was almost lost. There is one Advantage more by this *Watry Vehicle*, that by dissolving the whole *Compages* of the Bloud and Humours, *Nature* is enabled to throw off, by a *Natural Discharge* thro' the common Emunctories, what offends her, the Saline Parts by moderate *Sweat* and *Urine*, and the more Phlegmatick Particles by Perspiration and *Stool*; these are the ways, I

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conceive,

conceive, *Nature* takes when *ſhe* co-operates with theſe Waters in reſtoring, not only weak *Stomachs* and decay'd *Appetites*, but all other *Chronical* *Difeaſes* whatever: For if the *Qualities* I have mention'd are really in theſe Waters, and I fancy are too ſelf-evident to be denied, then what more *Univerſal Remedy* can we expect in ſuch Caſes? Certainly that which carries off the too viſcid and ſaline parts that offended in our *Bloud*, ſweetens all the *Juices* that remain, that is, renders them fitter for *Animal Spirits* and *Nutrition*, the chief *Design* of *Nature*; and then all the *Functions* and *Offices* in our Bodies muſt be regular, the *Animal Oeconomy* in good order, and *Health*,
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the greatest *Blessing* upon Earth, supported and maintain'd.

Thus, Sir, you may see here in one view how *Dropsies* in the beginning, before the *Tone* of the Bloud is too much weaken'd, and *Consumptions*, before too far gone, and the *Lungs* are too flabby, *Cachexies*, *Scurvies*, *Catarrhs*, &c. and all their dismal Consequences, may by drinking these Waters be remov'd, and a vigorous *Life* prolonged for a time.

2. The *Time* when they are to be taken. The most proper time for drinking these Waters is the Morning, between the Hours of Six and Nine, that they may have time to pass off between that and One, the usual Hour of Dining; it happens

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sometimes they pass not off so soon, some Persons I have known have kept them till about Midnight, with very extraordinary Success; the longer they lye in us the more good they do, by altering the *Humours* in our Body; so that no one should be troubled at this, provided the Stomach seem not loaded with them, and the Patient not at all sick, for then care must be taken to discharge them by *Art*. There ought to be at least two Hours or more allow'd for the drinking of them, for if taken too fast they pass off too quick, or else purge by Stool, and then the use of these Waters is lost. Very moderate Exercise is required during all the time of drinking, lest

Nature

Nature should be disturb'd, and that forc'd off by Sweat, which naturally should have been discharg'd by Urine. *Vid. Baccium de Thermis, Lib. 3. Cap. 2.*

'Tis a Query among Authors, whether Hot Bath Waters ought to be drank in *Winter*, and carried by them in the Negative, because they tell us Convulsions have often happen'd upon drinking them in that Season. 'Tis certain these Waters as to Taste and Heat are the same all times of the Year, and our Experience tells us may be drank at any time with Success, if the Case requires it. And all the Objection I know against drinking them in *Winter* as well as *Summer* is, the danger of taking Cold upon

the use of them in cold Weather, one of the worst Accidents that can happen to any Body that drinks these Waters. *Vid. Fallopium de Aq. Therm. p. 235.* The whole Course of these Waters is ordinarily five or six Weeks, but in some Cases more. And, if I don't mistake, my Honour'd Friend Mr. Long, that first encourag'd the drinking of these Waters so Universally as they are now, drank nothing else for near two Years together, only a very little Wine at times, and met with the greatest and strangest Success imaginable by his persevering with so much Patience; but ordinarily six Weeks is enough, and then they should be discontinued for a while, and
renew'd

renew'd again if the Case requires longer time. I have often observ'd, in some that have drank them too long, they would take off their *Appetite*, and make them sick; this is an Indication for the most part 'tis time to leave off: However, a few Doses of bitter Wine in the Morning, and a gentle Purge carries them clean off in a few days, and they reap the Benefit they expected. These Waters cold, with or without Wine, are the common Drink at any time between Meals, and Malt Drink avoided by most, especially in *Cholicks*, or any Infirmities of the *Bowels*, because of its loosening Quality. And a Glas of these Waters warm at Five or Six a Clock in the After-
L 5 noon,

noon, and sometimes going to Bed too, are very proper to compleat Digestion, and are of great use, as Experience tells us.

3. The *Quantity*, or how much. The *Quantity* of these Waters is from a Pint to three Pints, some may take two Quarts, few Constitutions require more, for 'tis possible to take too much of a good thing. I remember a Gentleman once drank five Quarts every Morning, fancying, that if a little did good, a greater quantity would do much more; I foretold him the Consequences, which fell out accordingly, for in a little time he had stretch'd the Tone of his Stomach too far, and pall'd it to that degree, that he quite lost his Appetite to all manner

manner of Victuals, which by a gentle Vomit, bitter Wines, and such like, was soon restored to him, and he convinc'd of his Error afterwards. To adjust however the Quantities every one should take, is impossible, and many fruitless Journies are made to *Bath* on that Account, for want of knowing the *q. s.* sufficient quantity or Dose for the Constitution and particular Case, as it then required: And there is more Nicety in it than every Body will imagine, for tho' the *Bath-Waters* are the pleasantest, easiest, and best Remedy we have for most Distempers, yet it too often proves ineffectual for want of Conduct: The Dose is half a Pint at a time in most
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Circumstances, sometimes the third part of a Quart; they that drink a full Pint I am apt to believe are very little the better for it, and over-act their part, except in some very few Cases.

4. The Accidents that happen to such as drink the *Bath-Waters*, which are these following, 1. Purging too much. 2. Vomiting. 3. Sickness of Stomach. 4. Sleepiness.

1. Purging too much. These Waters usually in the beginning Purge of themselves in many Constitutions, without the help of any Purgative at all, and this continues gently several days together, with Advantage to the Patient: This I conceive happens thus, the Waters dissolve and carry

carry off some vicious Juices and Salts that were in the *Stomach* and *Intestines*, which is a great Relief to *Nature*, and renders them more efficacious afterwards. But if Purging continues on, 'tis for the most part rather from a *Colliquation* of the *Humours*, or a Weakness in the *Intestines*, than any *Natural Discharge*, and so becomes injurious to the Patient; for by this he grows weaker and weaker every day, his *Stomach* fails, and in short, the Malady, be it what it will he drinks the Waters for, increases upon him. Now 'tis very obvious to common Apprehensions, that these Waters not passing the *Lacteals*, or entring into the Mass of *Bloud*, can't be suppos'd to be of much use

use to the *Animal Oeconomy*; in this Circumstance the Patient ought to drink the Waters very slowly, and in small quantities, for drinking them fast, and too much at a time, often occasion their going off by Stool; to prevent this, good warm comfortable things are of use, as *bitter Wines, Coral, Steel, Cinnabar, Antim. Antimon. Diaphoret. &c.* and sometimes a Dose of *Rhubarb, Diascordium, and Opiates*, going to Bed; by these the Tone of the Stomach may be recover'd, and so the Waters in a little time perform their Office regularly. This Accident happens oftener to Women than Men, especially such as are *Hysterical*, whose Digestions are bad, because the *Fibres*

of the Membranes of their *Stomach* and *Intestines* are weak, and the *Waters* by their weight slip thro' them with little or no alteration. This Accident rarely happens to Men, except such as are *Hypochondriack*, and that's but a different Name for the same thing, and *Vapours* is the common Name for both. If at any time they Purge strong Constitutions, and they feel little or no inconveniency by its continuance, 'tis because the Body was very foul before, or that they were naturally accustom'd to frequent Stools; and yet I have known strong Constitutions, fond of this Operation of the Waters, that have continued long enough to bring them into Fatal *Dropsies*,
which

which have carried them off in a little time. Take this then for a general Rule, if this Purging continues, and *Appetite* and *Digestion* fail, the *Bath-Waters* do more harm than good.

2. Vomiting. This happens not so often as the former, for tho' several Persons come to *Bath* every Year, with a Prejudice against drinking hot Water, yet they find quite contrary Effects, nothing sitting easier on their *Stomachs*: Nay, 'tis well known *Bath-Waters* will stay Vomiting, and when the *Stomach* is too nice; and kecks at every thing, *Bath-Water* will not only remain in them, but also refresh and nourish them; tho' this falls out but seldom, yet now and then

then we see it in cold Stomachs, that abound with *Acids*, which cast it up with their acid Juices mix'd with them; in this Case *Antimon.* *Diaphoret.* Testaceous Powders, Steel, bitter Tinctures, and Ecphracticks, with the Waters, and a Glass of true *Madera* Wine, an Hour before Dinner, are no contemptible Remedies; these respect the Cure of this Infirmary, and assist the Waters in their Operation; for as to their Vomiting, that was usual before, such Constitutions being very apt to vomit, and more especially at this time, when the Stomach is fill'd with Waters, which pass off but slowly in this Case; by this means the Waters mixing with these vitiated Juices, cause
such

such an Irritation in the *Fibres* of the Stomach, as force it sometimes to throw up its Contents that offended it; now this may be said to be a *Relief* many times, rather than a *Symptom* of any bad Effects of the Waters. Some I have known to vomit with these Waters, who have weak and small Stomachs, and either drink too large quantities at a time, or else they take off their Glass too fast. Such as are Wise enough to know the Cause, cannot fear of a Cure in this Case.

3. Sicknes of Stomach. When the Waters pass out of the Stomach into the Intestines slowly, the acrid and heterogeneous Juices are now mix'd with the Waters, the Stomach is more full, and

and the Fibrils of it touch'd in more parts, than when lank and empty ; which causes these unpleasing Vellications which we call Sickness at Stomach. This I have observ'd frequently in the Course of these Waters in the beginning , which sometimes has continued for a Fortnight or Three Weeks together, not without Pain also , and an unusual Weight. This chagrines some sort of Men very much, and makes them angry with the Waters, and curse them too ; who with the help of gentle *Purgers*, some good *Ecphratics*, *Patience*, and *Perseverance* in drinking on some time longer than ordinary , have gone away very well pleas'd with the desired Effect, and have not repented of their
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their coming to *Bathe*. Sometimes drinking the Waters upon a foul Stomach, without sufficient Preparations, may occasion this Disorder. A Dose or two of the Salts are not enough to carry off the Viscous Humours that many times stick so close to the inward Coat of the Stomach, that nothing so gentle can reach them. Some of these depraved Juices, and their vitiated Salts, mixing with the Waters not yet gone out of the Stomach, cannot but occasion *Fermentations*, and such irregular *Motions* in the *Fibres*, as must affect it in such a manner as to make a Man very sick and uneasy. In such Cases, a Vomit, or a brisk Purge or two before drinking the Waters, is very necessary.

cessary, and ought not to be neglected. Diureticks also in this Case are of Use; such as *Tinct. Chalyb. Tinct. Sal. Tart. Flor. Sal Armon. Pulv. Diuret. Fuller.* and such like Medicines as these; which by attenuating the Humours, and irritating the Fibres of the Stomach a little, are a *Stimulus* to the Peristaltick Motion, and help to convey and carry on the Waters out of the Stomach and Intestines into the Bloud. I am inclin'd to believe, the not passing of these Waters, for the most part is chiefly owing to the Defects of the Stomach and Intestines, and their Foulness, and rarely happens from any Affection of the Kidneys: When it does, that must be look'd on as
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the Original Disease ; and such Medicines as are proper in the Case, ought to be added to the Waters.

4. *Sleepiness.* Authors tell us That sometimes the Waters remain in our Bodies, and are felt only by a Weight and Uneasiness in our Bowels, which argues they are not quite out of our Stomach and Intestines. At other times that they lye in the Habit of our Bodies, and sometimes in the Blood-Vessels. I am of Opinion when these Waters remain in the Mass of Blood, and are not carried off by the Emunctories, but fill and distend the Blood-Vessels so as by pressing on the Cortical part of the Brain, they hinder the Separation of Animal Spirits, and

cause

cause a Drowfiness and Sleepiness, till the Waters are-carried off. There are few that drink these Waters, but find this Effect of them some time or other. Accidents may occasion this now and then in all Persons, and therefore it must be some general Cause; and I know none more likely than what I have assign'd; which I submit to the Judgment of the Learned. In this Case, by no means is this Sleepiness to be indulg'd, especially by lying down on a Bed or Couch; because that Horizontal Posture carries more Bloud up into the Head, which causes Head-aches, and several other Disorders. But a little moderate Exercise, and Company that's most agreeable, soon carries

ries this off, without any Physick at all. In fine, take this for a general Rule, That no Person ought to sleep till his Waters are pretty well pass'd off, that expects any Benefit by them.

2. They are sometimes, tho but seldom, taken *Cold* too upon the Place, and not without Advantage. Some Young Sanguine Complexions that I have known, could not bear their *Heat*, but were forc'd to keep them till they were *Cold*, to prevent a *Fever*, they heated them so much. In *Rheumatisms*, some *Gouts*, and a *Diabetes*, they are better *Cold* than *Hot*, as *Experience*, our best *Guide* and *Mistress* has inform'd us. I know very well 'tis affirm'd by some, that these Waters are only
good

good at the Pump. *Fallop* tells us, who wrote above a Hundred Years ago, That Sulphurous Waters, that lose their Virtues, should be drank as near their Head and Spring as possible, *vid. Fallop. de Ther. Aq. p. m. 241.* Dr. Baynard says in his *Appendix* to Dr. Floyer, That the Bath-Waters were very good drank at the Pump for weak Stomachs. And Dr. Ratclif last Year *ante manum* positively asserted, as soon as he came to Bath, they were good for nothing, (*i. e.*) in no Distempers, Twenty Foot from the Pump: And so by a Plenipotentary Power over the Minds and Fancies of ignorant Mankind, prevail'd with every Body to drink them at the Pump, without any

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Consideration of the particular Circumstances that might oblige the contrary. The Reason the *Learned Doctor* gave for it, to me was surprizing, viz. That he had observ'd Water fill'd warm at the *Pump* in Bottles, shrunk below the Cork when cold, which was an Argument that the Spirit and better part was gone off, in which consisted the chiefest Virtue of the Waters; and that that was the cause of the *Vacuum*. Had the *Dr.* consider'd how fine a *Spirit* this is, he could hardly have assign'd the Cause of the shrinking of the Water to the flying off of that or had he but been acquainted with the common Experiment to demonstrate all *Liquids* warm requir

require a larger space than cold, from the approv'd Principles of *Natural Philosophy*, he would have understood also, that any Water heated to the same degree must shrink as much in the Bottle when cold, as I told him. How the Dr. came to be so well acquainted with *Bathe-Waters*, as to presume on so bold an *Affertion*, and pretend to understand their Operations in all Cases, by only two or three days Experience, unless he had it by *Inspiration*, is impossible to imagine or conceive. All the Knowledge we can have of these Waters, is by our Experience of them on the place; and the particular Accidents we meet with in some *Constitutions* and *Cases*, are our only Guide in

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the Course of them; 'tis a Practice quite different from any other, and can never be learn'd by any body at a distance. This then was a very positive and general *Affertion*, without any real Foundation at all: But every Body knows, *in Universalibus versatur Dolus*; He must Trade in Politick *Universals*, whose Talent lyes not in Arguments on Particulars. I have heard it said, I know not how true, this Gentleman got such a Surfeit of *Syllogisms* once at Oxford, that to avoid all Arguments and Reasonings for the future, he shunn'd Consultations in Physick. Certain it is, those *Favourites* of his which he culls out and recommends in Town, and consults with

with, are such, as having for the most part little or no Reason of their own, always acquiesce in his, and Physicians here look upon it as a Scandal to have any *Favours* from him of that kind. There must be, no doubt, some secret Reason for so uncommon a *Humour*, that the World must not be acquainted with. *Learning* and *Knowledge*, like *Grace*, the more any Man has of them, the more Humble he is under a Sense of his want of more; and such Persons are always ready to hear the Reasons and Experiences of others. Had the Dr. but condescended to have heard my Observations on Mr. Cope's Case last Year at *Bathe*, I could have shewn him almost demonstrably,

'twas not in his Art to make him as sound as a Sucking Pig, as he promis'd: I was glad when the Dr. undertook him, for I avoid-
ed being concern'd all I could, because I saw his Case deplorable; and was not a little sorry when my Friend Mr. Cope was neither able to go, stand, nor speak sensibly, but actually dying, the Dr. should sollicit his Wife two days together to send him for London and Epsom, to take the Air; I suppose the Dr. was loth the Bell should be heard in Bath for the Man that he had once said, *He shall be well*. I was consult-
ed in this Point, and was not a little surpriz'd at the Inhumanity of the Action: I know very well the Dr. never thinks he can
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treat any of the Faculty rude enough, who, tho' they know very well the Doctor's Passive Valour, yet show they are very peaceable Men, expect no Honour by their Resentments, but sure to get a Law-Suit. But certainly there is something of a decent Regard to be had to the Patient, who should be treated with all the Respect, Tenderness, and Civility in the World. There is a Pity and Concern required from us for the Miseries and Misfortunes of Mankind; and we ought always to be ready to assist them upon all Occasions, and glad when we are serviceable, and not to make Sacrifices of Mankind at our Pleasure: But Pride and Ill-Nature

are the very worst of Vices a Physician can have, and whenever these recommend any Body to the Favours of the *World*, it's an open Demonstration of the *Folly* and *Madness* of Mankind, that they can bear such *Insults*. Dr. Baynard and I knew very well one *Jehu Ward*, who was a broken *Weaver* in *Spittle-Fields*, went over to *Holland*, and at *Leyden* practis'd *Physick*, a large City and University, Famous for Men of Learning in the Faculty of *Physick* at that very time. This *Spark*, tho' he could hardly Write or Read, being cry'd up by his Pot-Companions, had more Practice than all the *Physicians* and *Practitioners* in the *Town*; his House was crowded every day,
and

and he used People that came for Advice, with all the Ill-Nature and Ill Manners in the World: The best *Personages* in *Holland* have waited an Hour together at his Door, not to be admitted till he had smoak'd out his Pipe, or done playing with his *Cat*; and sometimes, if not in Humour, would not see them at all at that time. So that this Evil is Epidemical, and all the Inference I shall draw from this Story is, That Craft and Management join'd with Ill-Nature and Ill Manners, are better Qualifications many times for a Physician, than Knowledge and Insight in the *Art of Healing*. I hope no Body will think I design any *Parallel* in giving you the History

of this *Dutch Doctor*, as if I meant to compare the two Doctors together: By no means; for this *Weaver* was infamously illiterate, ill-natur'd, and ill-bred; whereas our Doctor is worthily esteem'd and admir'd by most, for the Character he has of a Man of true and sound Learning, easie Access, admirable Good Nature, and more than common *Humanity*.

I would not destroy, nor so much as shock the Faith of Mankind; it has a *Magical Power* in it, I do not understand. *Plures sanat in quo plures confidunt*, says the Learned *Rodericus a Castro*, *Med. Polit. p. 130*. And I remember the time when *Greatrix*, a *Seventh Son*, cur'd as many by the Touch of the *Kings-Evil*, and other Distempers,

stempers, as the present *King of France*. All I shall say, the Blessing of the *Holy Father* be upon the *Believers*, who, when he saw the Mob Worshipping him on his *Installation* at *Rome*, mumbled out these Words, *Si Populus decipi vult, decipiatur*; which the silly admiring Crowd took for a *Benediction*, and were well pleas'd. But to return to our *Bathe-Waters*; it has always been the receiv'd Opinion, that these and all other Waters are best near their *Head*; *Fallopins*, *Blondel*, *Fouet*, and all the Authors I ever met with, allow it. *Dulcius ex ipso Fonte bibuntur Aquæ*. So that this is no new *Doctrine*, but always taken for granted, and ever practis'd, where all other

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Circumstances concurr'd. But that they are good for nothing Twenty Foot from the Pump, is such a *Paradox*, that I should be glad, so accurate a *Pen* as the Dr. has upon all Occasions, and a Man of so much Natural *Sagacity*, would make out; because it would be of admirable Service to Mankind, and save a great deal of Expence. But *Craft* and *Claret*, I doubt, take up so much of the Dr's Time, that there is little reason to expect he will defend in Writing what he says only out of Design. Whoever will take upon him to maintain that *Affertion*, must prove also, and that very clearly too, that all the *Virtues* of the *Bath-Waters* consist only in their *Spirit*, and
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all the rest of the *Ingredients* are good for nothing; which contradicting some *Thousands of Experiences*, can't be true. The *Diluting* and *Diuretick Qualities* they have, when the *Spirit* is quite gone from them, have been of great use in the *Cases* foremention'd. This *Doctrine*, I take it, is pernicious too, and may in time be prejudicial to the *Bath-Waters*, because it obliges many to take them at the *Pump*, that ought to drink them at home at their *Lodgings*; the very *Fatigue* of the *Walk* is too much for many, and various *Inconveniencies* attend it. *Quiet* and no *Motion* at all, makes the *Waters* agree with some better than others; and some I have known have taken
them

them in Bed, because they found they never pass'd well with them out of it. There are various Constitutions, which require peculiar Directions, according to the Circumstances that occur. There is one common Inconveniency I have often observ'd to happen from running to the Pump in the Morning in all Weathers, which is of no small Consequence to the *Drinker*, and that is, it causes *Cold Rheums* and *Catarrhs*, which very much disturb the whole *Animal Oeconomy*, and render the *Waters* of little use while they last. Upon these Considerations, I say, 'tis not necessary in all Cases to go to the Pump; the *Mischiefs* that follow it, are greater than the *Benefit* we expect

expect by it; and a Glass out of a Bottle brought warm from the *Pump*, and drank at home, differs not in goodness so much from one drank at the *Pump*, that we should run the risque of so many cross *Accidents* as may happen on this Occasion: Besides, it would be strange to believe the *Trade* of sending these Waters to *Ireland*, *Scotland*, and all parts of *England*, should continue so long, if they were not found good at a distance. So that after all, 'tis possible the Dr's. *Ex-tempore* inconsiderate *Affertion*, may not be true, and the *Patient* may drink these Waters at his Lodgings, tho' above Twenty Foot from the *Pump*, and expect Success, rather than expose himself.

himself to all the Inconveniencies mention'd. I have only one thing more upon this Head, and that is, when I said these *Waters* are better *cold* than *hot* in some *Cases*, I added these Words upon the place: For certainly Cold *Bath-Water*, of two or three Hours standing, is better than it can be any where else of some Days and Weeks, when it has not only lost its *Native Spirit*, but acquir'd some degrees of *Pu-
trefaction*. And thus, Sir, I have ended with my first Part, concerning the drinking of these *Waters*; and am come now to the

2. *Bathing*, which, after some days Preparation, by drinking the *Waters*, and necessary Evacuation, as there may be occasion,

sion, comes next to be consider'd. I need say nothing to you of its *Antiquity*; *Plutarch*, *Diodorus Siculus*, *Pausanias*, all the Ancient *Historians* and *Poets*, make frequent mention of them in their *Works*; and *Baccius de Therm. Mercurialis* in his *Gymnasticks*, and the Old *Authors de Balneis* are full of Instances of the Uses the *Antients* made of *Baths Cold, Hot, and Temperate*: I shall only observe to you, There are several *Baths* in *Bathe* of different degrees of Heat, that may answer most of the various *Circumstances* of the *Patients* that apply to them, some requiring warmer than others; and 'tis a matter of no small importance to the *Patient* which of them he uses.

Hot

Hot and Temperate Baths there are at *Bathe*, but no *Cold* one at all; but whenever the *Citizens* shall think fit to set up such a *Conveniency* as that would be in some *Cases*, they would not find it any *Prejudice* to the other *Baths*. I know no place where it can be practis'd with more prospect of *Success* than there; for after a *Course* of *Drinking* and *Bathing* for some time, the *Bloud* is sweeten'd, and the *Skin* cleans'd; nothing in my *Judgment* like the *Cold Bath* at the last in many *Cases*, to confirm the *Habit* of the *Body*. These then are all the *Baths* we have, which, tho' not comparable to the *Magnificence* of the *Roman Baths*, that were adorn'd

dorn'd with a great many *Marble Pillars*, and curious *Workmanship of Silver and Gold*, studded with great varieties of *precious Stones*, that gave the place a *Magnificent Lustre*, yet are made very convenient, kept clean, and in good order.

1. *The King's Bath*, which is the warmest of all. From the *Springs* of this *Bath* our *Pump* is supplied with *Waters* for drinking, by *Contrivances* that convey the *Water* directly from them pure, without communicating with the *Water* of the *Bath*. This *Bath* I take to be the best in all old and cold *Aches*, *Pains* in the *Bones*, and *Diseases* in the *solid parts*; which are more than the *World* perhaps will at present

sent believe, who attribute almost all our *Distempers* to the *Humours*. By the help of this *Bath* the *Intestine* Motion of the *Bloud* is heighten'd, all its component parts agitated and attenuated, so as to be dispos'd to plentiful *Sweats* after in *Bed*, which are of great use to those that want such an *Evacuation*.

2. The *Queen's Bath*, which is no more than an *Appendix* of the former, has no *Springs* in it of its own at all, and receives all its *Water* from it by a common *Passage* from one to the other; this is much more *Temperate* than the *King's Bath*, and serves as a *Frigidarium* or *Tepidarium* to some, who having Bath'd in the *King's Bath*, use to cool themselves

selves here before they go out, to prevent their Sweating too much afterwards in Bed.

3. The *Hot Bath*. So call'd some say, because formerly the hottest of them all. This *Bath* is not so hot now as the *King's Bath*, and so may be of use where a moderate *Heat* is required. And it often happens this *Bath* is advis'd with Success, when the heat of the *King's Bath* would not be tolerable in some Constitutions. The *Leprous Bath* is a part of the *Springs* of this, and is only separated from it by a Wall, for the conveniency of such as are not fit to Bathe in common with other People.

4. The *Cross-Bath*, which is the most Temperate of all, and
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for that Reason I am very apt to believe of greatest use to *Bathers*: Many can't bear the *Heat* of the *King's Bath*, because it occasions *Fevers* now and then, and various other Disorders arise from the irregular use of that *Bath*; all these may be prevented by the *Temperature* of this, in which *Hysterick Women* and *Hypochondriack Men* Bathe often with good Success: This *Bath*, tho' for degrees of Heat is much the same with the *Queen's*, yet I think is much better, because it has Springs of its own, which the other has not; the Reason of this Opinion I shall give you in the Close of this *Dissertation*. There is one thing not to be omitted, That this *Bath* is peculiarly

liarily Famous for any Shrinkings or Contractions in the Nerves or Tendons; very Eminent Instances of which have fallen under my Care and Observation, and the *Votivæ Tabulæ* were hung up for a Remembrance of the Cure; such Cases, I am apt to think, will hardly succeed so well in any other Bath. This one general Observation is to be made on them all, That the more Temperate the Bath is, the longer time the Patient may stay in it, when he Bathes, and the fewer accidental Inconveniencies attend it.

Thus, Sir, I have given you an Account of the Baths in *Bathe*, in as short and compendious way as I could. As to the time
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of going into the Bath; the Patient's stay there; which Bath best; how often to be repeated, and how long to be continued; all these things depending upon the Constitution of the Patient, and the particular Case, cannot be determin'd but upon the place. And these are to be well consider'd, because Errors and Mistakes herein are of very ill Consequences, and often frustrate us of the Benefit we expected by the use of the *Bath*; but if these Circumstances are rightly manag'd, the *Patient* gets great Advantage, and seldom fails of a good Habit of Body after the use of them. In the next place I shall give you my Opinion of the manner of
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the Operations of Bathing on our Bodies. And,

1. These Waters then by their *Natural* and *Innate Heat*, cause a better *Digestion* in our *Bloud*, by attenuating its parts, and increasing its *Intestine Motion* and *Heat*; and the *Sweats* that follow afterwards in Bed, evacuate all the parts of our Bodies. So that this must be of great use in Cold Phlegmatick Constitutions, whose *Natural Heat* is weak, for it strengthens the Tone of all the parts, and mends the whole Habit of the Body.

2. They soften all the parts that are harden'd and contracted by Cold, and discharge all Heterogeneous Matter that is impacted in the Pores of the so-

lid parts, Cold Aches, &c. Thus all Contractions in the Tendons, or Shrinking of the Nerves, as well as Paralytick Relaxations and Palsies, are cured by the same Waters; and by supporting Nature, they become of Universal Good to the whole *Animal Oeconomy*. I shall conclude this Head with that Saying of Oribasius, lib. 10. cap. 3. *Princip. Med. Balneorum Sponte Nascentium multo major & efficacior vis est, quam eorum quæ Arte parantur*, (i. e.) Natural Baths are much better than any Artificial ones whatsoever.

The common *Accidents* that attend Bathing as well as Drinking these Waters I shall reduce to these few. (1.) There happen sometimes Inflammations of the

the whole Body, or else in some particular part, which are to be removed, by Bleeding, a cooling, moist, low Diet, and such Methods as are proper in common *Fevers* and *Inflamations*. (2.)

A very great *Thirst*, prevented best by drinking some Glasses of the Waters in the Bath, when any one Bathes. (3.) Violent

Sweats. These are a plain *Indication* to forbear Bathing, or at least to make use of the most *Temperate Bath*. (4.) A lost Ap-

petite; from the disorder and heat the whole Body is put into; if this happens only on the day they Bathe, it soon goes off.

(5.) And lastly, a *Costive Body*. These, and others I might name, are all owing to the *Heat* of the

Bath-Waters, and are occasion'd by irregular Bathing for the most part, and so fall under one Consideration, and that is, of an *Inflammation*, or too great heat in the *Bloud*; as such they have but one common Cause; the *Indication* is plain, and the *Cure* easie.

3. And lastly, *Pumping*. This is us'd often in the *Bath*, upon a particular part, according to the *Occasion*; sometimes on the *Legs*, *Arms*, *Shoulders*, *Head*, *Neck*, &c. Sometimes also out of the *Bath*, which is called *Dry Pumping*; this may be done any time of the day, but usually is at *Night* going to *Bed*, the part wrapt up in *Flannel*: These are of very good use in particular *Affections* of any part; and the *Dry Pump*

is for the most part used when there are such Circumstances as forbid *Bathing*, which often happen. *Pumping* then requires the same Preparations that *Bathing* does, and is attended with the same Accidents, and so should have the same Method of Cure. This was formerly done by *Buckets*, and was like what the Ancients called *Stillicidium*, and the Italians *Doccia*. But 'tis much better now by the *Pump*, whose continued steady Motion, without Intermiſſion, is much the best. Both in and out of the *Bath* they use these *Pumps*, as the Case requires, from 2 or 300 to a 1000, or 1500 *Strokes* a day, and sometimes more, which is often too much, and attended

generally with the *Accidents* mention'd. Thus, Sir, have I finish'd my Thoughts on the three *Heads* I propos'd at first; I shall in the next place acquaint you,

1. What Diet is necessary with these Waters. 2. Answer some Questions that may arise. 3. And lastly, I shall make some Remarks on the place itself, where these Waters are, and submit all to your Judgment and Candour.

1. Then I must needs say, I am of Opinion there is too much Liberty taken by a great many that go thither for their Health, who ought to govern themselves with more Caution in their eating and drinking during their short stay there; and
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this I am persuaded often hinders
their good Effects. I shall not
enter into the Detail of this Opi-
nion, but only say in general,
That there, and every where else,
the more simple our Food is, the
better 'tis for us: Compound
Viſtuals, and mix'd Meats, high
Sauces, &c. make too com-
pounded Juices in our Bodies,
and by consequence complicated
Diseases. *Temporibus priscis Homi-
nes paucissimis rebus contenti Morbi
non aparuerunt, neq; Nomina eorum
innotuere, Lautæ Mensæ, & Opi-
para Convivia primum introduxere.*
Mercurialis Art. Gymnast. p. 1.
The more simple then our Nou-
rishment is, the better here; and
fresh Meats, and such as are of
easiest Digestion, agree best with
Bath-

Bath-Waters, and render them most effectual. As to *Malt Drinks*, I think, where the Stomach is weak, and the Bowels slippery, they are to be avoided, lest their *Fibres* should be more relax'd by them, and the Waters should run off by *Stool*, and so lose their Virtues. In this Case *Wine* and cold *Bath Water*, or Water and a *Toast* put hot into it, is better, and more agreeable. Most People find it necessary to take a Glass of *Wine* at Night; and *Madera*, where it may be had true, I take to be the best, because of its driness on the *Tongue*, the strength of its *Spirit*, and the little or no *Tartar* in it. Others, who are accusom'd to the use of *Malt Drinks*, and labour not under

der the Infirmities before mention'd, may use them, at least at *Meals*, as they us'd to do before they enter'd on the *Course of Bathing and Drinking*, provided they observe Moderation, and don't abuse, that Liberty may be allow'd them. There is one thing more not to be omitted, and that is, that tho' these and all other Waters are apt to create great Appetites, and make us very hungry, yet we should not charge our Stomachs too much at any time; and slight Suppers and early, are much better than going to Bed on a full Stomach, for such as desire Benefit by the Waters. In the next place I shall endeavour to answer some Questions

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stions that may be made concerning these Waters.

1. Question, Whether these Waters are good in the Pox?

This Question is to be found in most *Authors* that have Writ of *Bath-Waters*, who, for the most part, will allow of neither *Bathing* or *Drinking* them in this Case. *J. Baubinus*, *Hist. Font. Boll.* p. 289. forbids their being drank, because of their *Humidity*; this Disease requiring all drying Medicines. But my good Friend *Dr. Guidot* has in few Words very Learnedly answer'd all the Scruples about the Drinking part, when he says, they operate not only as *Purging*, *Diuretick*, *Sudorifick*, and sometimes by *Salivation* too, but as great *Alteratives*; and concludes,
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and that justly too, they must as such be of use in this *Distemper*. As to Bathing, no body hardly ever attempted it. *Baccius lib. 3. cap. 5.* will not consent to Bathing in the Pox, because of the heat of the Waters. *Fallopins de Aq. Therm. cap. 11.* tells us, he had seen several Cured by drinking, but then adds these Words, *Non utatur tamen qui Gallico laborat Aquis his Medicatis per infessionem*, which forbid Bathing altogether. And Dr. *Guido* very faintly allows it, but says nothing to recommend it. For my own part, I know of my own *Experience* I have seen drinking and bathing both with *Mercurials* more than once in this *Distemper*, with all imaginable

Success,

Success, and never would desire any better help than what these Waters externally and internally can afford me; and am of Opinion with Dr. Fouet, *Bains de Vichy* p. 273. *Son mal sera incurable, sil ne cede a la boisson, & aux Bains de ces Eaux*, That if they can't be Cured here, they will hardly yield to Medicines any where else.

2. Question, Whether the Bath-Waters are good in the Gout?

Dr. Auberry, *Bains de Bourbon*, p. 212. Printed at Paris 100 Years ago, commends the Bourbon Waters in the Gout, after some Universal Evacuations, and between the Fits; for he says, it does not only dissolve the remainder of the Gouty Matter, but al-

so dries and fortifies the Joints ; but at the same time advises the use of them on the place, and that for a considerable time together. Mr. Long is a living Demonstration of the use of *Bath Waters* thus, by Bathing and Drinking, because he finds the Benefit of both. And certainly it is of great use to such as are well stricken in Years, or *Cripples*, but must be used with a great deal of *Caution* in Young and Sanguine Constitutions.

3. Question, Whether we Sweat in the *Bath* under Water?

I answer. The Great Dr. R. one day in the *Cross-Bath* ask'd me whether ever I had made any Trials, by which we might come to a Certainty, what we lost in Weight

Weight by Bathing? I told him No, because I thought there was so much Nicety required in such an Experiment, that I could not see how it could be try'd any where but in the *Bath* it self, by some Hydrostatick Engine, contriv'd on purpose to weigh our Bodies there, for out of the *Bath* I thought it was altogether impossible to be exact; besides, I told him I was of Opinion it was hardly worth while, because I did not see how any part of our Body could sweat under so great a Weight of Water. Upon this the Dr. ask'd me, how the *Bath-Guides* came to be so thirsty in the Water? I told him I thought the Reason of that was very obvious, and proceeded from their being
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a great part of their Time in the Slip, where they are almost out of the Water, and liable to Sweats; besides, that they were very much expos'd to them also in the Bath, by wearing no Waistcoats that stick close to them, nor keeping their Bodies under the Water, as the Gentlemen do: And here the Philosophical Conference ended. Give me leave to prosecute this Argument a little, which I shall endeavour to make probable from *Authority* and *Reason*. Dr. *Blondel* in his Description of the Baths of *Aken* in Germany, cap. 9. says, *In Balneo Corpus circumquaq; ambitur ut non sit diffationi locus.* And *Aristotle* in his Problems, Sect. 2. Cap. 42. is of Opinion, *Membra Aquæ calidæ immersa non sudant etiam si*

etiamsi ex seipsa recalescunt. I know the Learned *Sanctorius*, *Sect. 2. Aph. 2.* tells us, *Lavacra actu calida juvant perspirationem*, That Hot Baths increase our Perspiration; which I conceive does no way contradict the Notion at all, that we do not Sweat under Water, there being a very great difference between Sweat and Perspiration; as the Learned Dr. Cole has made out in his Treatise *de insensibili perspiratione*, p. 74. 75. Perspiration then may continue in the Bath, and be somewhat greater too, because its parts are finer, and their force may be increas'd by the heat of the circumambient Water, but not obstructed; whereas at the same time the pressure of the Water on the

Habit

Habit of our Body may probably enough contract the *Cutaneous Glands* there, and so prevent the separation of any Matter that way. *Vide Bellini de Sang. Miss. Propos. 8.* By Experience we know very well, that Men not us'd to Bathing in hot Water, can continue in the *King's-Bath* 2 or 3 Hours together, with little Thirst all the time, and will Sweat very plentifully afterwards in Bed. Now Reason tells us, 'tis hard to believe any Body could bear so great Evacuations so long together. And this Argument will have more Strength and Force, if we do but consider, how in the *Bagnio*, where nothing hindring, and our Bodies being free, we Sweat very plentifully, grow very thirsty,

sty, and soon faint, so that in
 about half an Hour we are forc'd
 to quit the hot Room for a cold
 one, in order by degrees to cool
 again. I am of Opinion further,
 which I humbly submit to the
 Learned, that 'tis impossible to
 come to any positive Decision
 of this Matter, unless we are sure,
 that no parts of the *Bath-Waters*
 while we Bathe insinuate them-
 selves thro' our Skin and Vessels
 into the Bloud; and till we know
 how to account for such, I can-
 not see how we can conclude any
 thing about our *Sweat* or *Perspi-*
ration in the Bath. *Bellini de Sang.*
Missione, p. 151. thinks it a very
 plain Case, that in Bathing the
 Waters do not only penetrate the
 Skin, but that they enter deeper
 into

into the very Bloud; so that the solid parts are not only soften'd, but the Bloud is diluted, cool'd, moisten'd, and attenuated, and its Circulation and Perspiration thereby promoted. The Divine *Hippocrates* affirms, That our Bodies are inspirable as well as perspirable, when he says, *Epidem. Lib. 6. Sect. 6.* ἐκπνοὸν καὶ ἐμπνοὸν ὅλον τὸ σῶμα. And *Galen* in his Comment on these very Words says, 'tis most probable by them the good Old Gentleman meant, that the *Arteries* in the Habit of our Bodies receiv'd in Air, which by them was convey'd to all the parts of the Body. *Cesar Zarottus*, a Man of admirable fine Learning, in his *Medica Martialis*, p. m. 158. has this

this Expression, *Alterat vero Balneum quatenus refrigerans est, intemperiem emendando, Sitimq; tollendo, per Corporis meatus intro assumpta Aqua*: These Authorities and Experiences put together, make my Argument more plausible. And for this Reason, as I promis'd before, I presum'd to say the *Cross-Bath* was probably better than the *Queen's*, tho' near of one Heat, because the *Cross-Bath* hath Springs of its own, and its proper *Native Spirit* is of more use to us in *Bathing*, when it penetrates into our *Bloud*, than that which has no *Springs* of its own, but is deriv'd from another *Bath*, and brings with it all the Filth occasion'd by such as bathe there. If this *Doctrine* be not allow'd,

allow'd, that Waters may penetrate thus, I would fain know, what *Emollient Fomentations, Ointments, Artificial Baths* of several Kinds, *Relaxers, Comforters* and *Strengtheners, Epithemata*, or things applied to any part; viz. the Region of the *Kidneys, Liver, Spleen, &c. Moisteners*, and *Anodines*; or what will it signify, whether the *Baths* are made of *Oyl, Milk, or Water*, if nothing but their *Heat* is to be consider'd? And how comes a *Bath of Wine* to exhilarate and refresh the Spirits more than any thing else. *Abisbag* I am persuaded kept *David* alive, not only by the bare natural Warmth of her Body, but also by the Moisture and Nourishment he received at the Pores of his Body from hers, which cherish'd and refresh'd him. And this, I take it, was the Case of a Worthy Patriot, who, I have been told, about 25 Years ago was reduc'd to so low a Condition, and so weak, that he abhor'd even *Kitchin Physick*, and yet was restor'd by a couple of Buxom Girls out of the Country, laid warm to his Sides,

Sides; is alive to this day, and one of the heartiest Men walks the *Exchange*. *Magni refert quibus cum dormis*. I shall add a few *Instances* to prove this Point. It is well known *Garlick* applied to the Sole of the Foot, will soon be tasted in the Mouth, a Chick when it comes out of the Shell weighs much more than the White that fed it. All which I think are sufficient to prove, that our Bodies may be as well inspirable as expirable, that is, that there is a Magnetism in Bodies, and if so, 'tis probable we may receive such quantities of the *Bath Waters* into our Bodies by the Pores when we bathe, as may be greater than what we lose by Perspiration, and the sweat of the parts above Water, or at least it may be enough to puzzle any inquisitive enquirer into the Matter. *Vid. Sinibaldi's Apollo Bifrons, p. m.*

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In the last place I shall say somewhat of the Place it self; which though it stands very low, and may upon that account be supposed to be too close and confin'd an Air to be Good and Healthful.

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thy, yet I take it to be the Healthiest spot of Ground I ever saw Foot on in my Life. Mr. Boyle in his *Book of the Causes of the Salubrity or Insalubrity of the Air*, p. 4. thinks 'tis probable, *That in diverse places the Salubrity or Insalubrity of the Air consider'd in general, may be in good part due to Subterraneal Expirations* And 'tis not unlikely I conceive, that that Earth, that can impregnate Waters with such balsamick, healing and agreeable Ingredients, may also send up into the Air such benign *Effluvia, or Exhalations*, as may have a kind Influence on our *Constitutions*, and be the Cause of *Health*. But this being an Argument *à priori*, I shall not insist on it as any more, than a bare probability : My Argument then that I lay all the stress upon, is, That I have observed more Old Healthy People in that City and Neighbourhood than I ever saw any where else. Let any body but consider how few Dye every year of those that come to Bath, almost Dead before they arrive, how few Accidents happen there among

among such Numbers of Persons from all sorts of *Airs* and *Counties* ; and I fancy he will think it reasonable to attribute this in part, to the Salubrity of the Place, as well as to the Goodness of the Waters. These things considered, I may presume to say, *Bath* is the *Assylum Chronicorum Morborum*, the Refuge for all *Chronical Diseases* ; *Scurvies*, *Cachexies*, *Colicks*, *Old Aches* and *Pains*, and almost all lingering Diseases that Afflict Mankind, are here very often Cured *cito, tuto, & jucunde*, which in all probability would yield to no Course of Medicine out of it. And tho' Dr. R. coldly calls them only a Vehicle to his Medicines ; a Vanity peculiar to himself ; yet 'tis more than probable that the Dr. owes more to the Surgeon that let him Bloud plentifully in the room of his Cupping, and the *Bath-Waters* he speaks so indifferently of, than to any Medical Cunning of his own Brain.

F I N I S.